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# USSR Report

## NATIONAL ECONOMY

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USSR REPORT

NATIONAL ECONOMY

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## ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

### RESTRUCTURING BY ECONOMIC VS ADMINISTRATIVE LEVERS DISCUSSED

Moscow PRAVDA in Russian 20, 21 Jan 87

[Article in two installments by G. Popov, doctor of economic sciences, Moscow State University professor, under rubric "Problems and Judgments": "Restructuring in the Economy"; first paragraph of each installment is source introduction]

[20 Jan 87 p 2]

[Text] In practically every sector of the economy, the New Year's message to the Soviet nation noted, we have succeeded in moving ahead. But we can still see the signs of stagnation, the restructuring is proceeding slowly, old approaches are pulling us backward, and inertia is strong. What must the real levers of acceleration be? In order to find an answer it is necessary to look more attentively at what M. S. Gorbachev has defined as inhibiting factors.

#### 1. From the Administrative to the Economic

First I would like to discuss a recent instructive situation. One of the newspapers invited the responsible workers at number of ministries and departments to discuss the new ways to improve the economic mechanism. The comrades from the ministries spoke competently and self-assuredly. They have already worked out a number of problems. They also have seen in what directions they should move ahead. So I wanted to shout out, "There it is! Restructuring in action!"

But the picture was slightly spoiled by the television journalists. They asked their newspaper counterparts to allow them to take advantage of a convenient situation and to continue the discussion with a representative meeting. They set up their floodlights and dumped out onto the table a paper bag of potatoes that they had bought at a nearby store. They were dirty, bruised, and rotten. Then they asked, "Could you please express your opinion about this food product that everyone eats and also suggest the ways in which industry and the supervisory organizations could help the situation?"

Many of those who were present were genuinely offended. At first glance they were justified in feeling offended: they produce specific machines, machine

tools, and attachments -- whatever is planned for them to produce. As for the quality of potatoes, other people are responsible for thinking about that.

Is that really so? Today the criterion of the work performed by a branch must be, in the final analysis, the satisfaction of the needs of Soviet citizens. And if the potatoes are bad, then no one, regardless of how far away from our dinner table that branch is situated, has justification for complacency.

No, it is still too early to pin a tag on ourselves, saying "We've restructured ourselves!" Furthermore, genuine restructuring cannot be resimplified. We are compelled to make changes in the management mechanism without stopping the economy, "on the march." Speaking in figurative terms, we cannot temporarily leave our home in order to accelerate the repair of the building. Restructuring is also hampered by the fact that there is still not enough knowledge about the specific paths for implementing the strategic line set down by the 27th CPSU Congress. Everyone knows what has been hampering us, but as for what practical steps we should take to correct it, so far no one really knows.

In addition to such objective causes, there are also subjective ones. They are subjective, but by no means random, since they are rooted in our previous experience, in the previous system of chiefly administrative management. Sometimes we do not see the dialectical process when it is precisely the successful application of various methods that has led to such a growth of the economy that has made the methods that evoked that growth unacceptable and obsolete.

Of course, it is a rare situation when anyone stands up and openly supports the preservation of administrative methods. But placing one's concealed hope on them, covered over by concern for planned procedures and centralism, is still extremely extensive. In the practical situation this means placing one's hope on control. People think in approximately this way: if every worker, enterprise, and institution were to fulfill completely his or its obligations, whether it be an instruction pertaining to one's official position or the pledges to the consumers, everything in the economy would fall into place. Therefore, they say, it is necessary to intensify, to toughen, the punishments for every kind of violation.

The more far-seeing proponents of the preservation of the administrative levers feel that the problem is broader. The problem is not in the violations themselves, but in the persons who commit them -- the managers. Therefore it is necessary to take decisive steps to get rid of unsuitable workers.

But the question arises, how does one draw a line between suitability and unsuitability? One raykom secretary, when reproached for his poor work, objected, "But people feel that I have been working well. Call a plenum and ask them." He was convinced that he would be supported. However, the value of that support is not great if one considers that that secretary took a long period of time forming a plenum makeup that was very "favorable" to himself. In that situation an appeal to democracy is, if anything, a mockery of democracy and covers over the very same management.

There have been attempts to employ command methods, but ones that have been modernized in the spirit of the time. In this regard I shall take the risk of expressing a few comments with respect to placing excessive hopes on state acceptance of output. The benefit from this measure is obvious. At the same time it must be remembered that the numerous supervisory levels -- economic, state, party, public -- have fought for many years against defective work, but still did not succeed in eliminating it. This is not accidental. All the administrative methods of control presuppose the existence of ideal controllers -- persons who are unselfish and unbribable. But why will the state acceptance system succeed in finding such people, if other agencies have been unsuccessful in finding them? The controllers, like everyone else, must use various "angles" to get tickets for an official trip, to get hotel rooms, to get their children into a Pioneer camp, to obtain housing, etc. Gradually the controllers inevitably become just like everyone else around them. Understandably, this reduces their ability to fight against violations, not to mention reducing the trust that the workers have in their impartiality. And without the support of the people, punishment will not help much.

Of course, the economy incurs tremendous losses both from violations of discipline and from poor managers. And this is not even mentioning embezzlers of public funds and petty thieves. It is necessary to take decisive steps to combat all this. But will punitive measures alone be enough?

An acquaintance of mine was made a manager at a ministry. At the plant he had fought for many years for the new type of cost-accounting [khozraschet]. But he had been on the branch staff only a few months before he began saying that the enterprises should not be given broad rights. As strange as it seems, that metamorphosis had occurred as a result of that economic manager's conscientious attitude. At the plant the desire to fulfill the enterprise tasks well had encouraged him to fight for the expansion of independence, but at the ministry his conscientious striving to assure the fulfillment of the assignments for the branch as a whole had turned him into an opponent of genuine cost-accounting.

As we can see, the crux of the matter is not only the people, but also the mechanism of administration. Even if there is complete implementation of all the current instructions, norms, and laws for genuine acceleration, I feel that there is scarcely a chance of succeeding. Administrative methods have considerable possibilities, but their force is limited. They begin operating especially poorly when it is necessary to fight for scientific-technical progress, when it is necessary to administer people's minds, and to take bold steps to reject the old if it is ineffective.

The persons who usually prefer the administrative control methods are the managers who have a shallow knowledge of their job and who are capable only of formally comparing the norms with the result. And so they reduce the restructuring to only the intensification of inspections. There arises a kind of continuous hunt for economic managers. The most dangerous tactics are to punish any deviations from the rules: whether those deviations were made in the interests of the job to be done, or for the sake of one's own benefit. As a result the managers are increasingly afraid of carrying out surveys. They

become passive and try not to change anything. That is why, I think, the chief emphasis should be placed on economic methods. What is happening in that sphere?

One of the brigades at a major Leningrad plant has changed over to the contract system. In several months it fulfilled its annual assignment, and then what? It was left without materials, orders, or even a wage fund, because the plant had not been given any additional resources and, moreover, the finished items were not yet needed by the other shops. In a word, the acceleration in one sector does not provide very much without changing the principles of cost-accounting, planning, and supply in the entire production system.

Or take the well-known Goskomtrud [State Committee for Labor and Social Problems] decision concerning wage and salary rates. That decision specifies in detail to whom one can give what, and how much, either along the wage rate or the salary rate scale. The plant is supposed to earn by itself the money for this purpose. The intention is a good one. However, when undertaking innovations, it is necessary to see not only their pluses, but also, so to speak, their down sides, and to act in such a way as to avoid any possible failures. Are we really to believe that it is very important for the worker to know what share in the 250 rubles he has received is made up of the wage rate and what share is the bonus? In any case he will receive his 250 rubles. This is yet another version of a fairly typical approach: it is as though the economic levers are being improved, but actually they are being made more complicated by means of a mass of purely administrative limitations and barriers.

But the chief problem -- making the wage depend upon the final results -- has not yet been resolved by Goskomtrud. The major part of the fund for paying the wages of the labor collective continues to be formed on the basis of the "gross output," irrespective of the labor-intensiveness or quality of the output. The enterprises continue to have meager opportunities to provide any real incentive for an increase in labor productivity.

And, finally, let us look at the most progressive method -- self-supporting production [samookupayemost] and self-financing. A few people are already inclined to see in it that complete cost-accounting that is mentioned in the documents of the 27th Congress. Let us see what is supporting itself now. The consumer's direct production order? An initiatory undertaking by the enterprise itself? Definitely not. The things that have to support themselves are -- would you believe? -- the directive planning assignments that have been received from above. And this is not on the basis of a price that reflects consumer demand. The price remains what it used to be, a price that is in essence an cost price and in form one that has been officially approved. As a result, self-supporting production does exist -- that is a plus -- but it is incomplete, because one cannot transfer the entire responsibility for the results of the work to the labor collectives. Many of them continue to strive at all costs to get reduced plans, because even with self-supporting production the wage fund is not properly linked with the final result.

Although the collective itself will now earn money for the expansion and modernization of production, it has been authorized to "barter," (as was the situation after 1965, when the production development fund was created), only an insignificant part of that fund. For the rest of the money, the collective must continue to write requisitions, submit them for approval, and strive to get them included in the plan. The only thing that is self-financed is that scientific-technical progress that is approved at the ministry.

Without a doubt, the cost-accounting in the large-scale experiment is greater than yesterday's. There are even fewer doubts that the cost accounting of self-supporting production and self-financing is more thorough than the previous ones. But the chief shortcomings of the old order has not yet been overcome. And therefore the statements concerning "complete cost-accounting as of 1 January 1987" are, if anything, the old habit of reporting, because many enterprises continue to operate at a loss and are not ready to change over to self-supporting production or complete cost-accounting.

Thus, many current innovations have not yet reached that goal beyond which one sees the beginning of the real changeover from chiefly administrative methods of administration to chiefly economic ones. As a result, those latter methods, although they do act as an acceleration factor, by virtue of their incompleteness and their incomplete structure, have not been completely implementing the chief levers of effectiveness.

But what has been hindering the real conversion to the chiefly economic methods of administration that are capable of accelerating our development for a prolonged period of time? We shall answer that question in the concluding part of this article.

[21 Jan 87 p 2]

[Text] The restructuring has been proceeding slowly because -- according to the author of the first part of this article, which was published yesterday -- hopes are still high on using administrative methods of management, and because the economic methods are being employed incompletely. Why is this occurring? And how do we get out of that situation?

## 2. Managing Vested Interests

Standing behind the attempts to preserve administrative methods and behind the timidity in employing economic methods are real people. The people who act primarily as an inhibiting factor are those workers in various economic agencies whom the restructuring threatens with a loss of their job. Closely connected with them is the apparatus of departmental workers, whose status and role are inseparably linked with the shortcomings of the existing system of administration -- for example, with the shortage of commodities and housing and with their distribution.

The restructuring is also being restrained by those workers and agencies whose jobs are preserved, but whose status and role are changing. When changing from administrative command methods to economic methods, they must begin to administer by relying on their subordinates' material self-interest. And this

is a complicated matter. When I command, I am always right, and the subordinate is required only to execute my orders. He cannot question my competency. But if a person administers by reacting to people's interests, and if his subordinates also have the right to discuss an order that they do not like, then it is necessary to know at least a little more than everyone else. And that kind of perspective does not inspire everyone, because not everyone is capable to working this way.

The situation is complicated by the fact that the inhibiting factors in the system of economic administration receive indirect support in the position of certain workers in the local party agencies. During the years of chiefly bureaucratic administration, they developed those management forms which do not work now. In particular, much time and many efforts were spent in monitoring the level of the plans, and then their fulfillment at any cost. Moreover, they could require, for example, construction workers to erect unplanned objects although that led to delays in the completion of even those capacities that were very important for the national economy. The changeover to economic methods, the development of self-government, and the principle of electing economic managers sometimes seem to these party workers to be practically the complete collapse of their previous habits.

I am not even speaking of the kind of "old believers" who object to the restructuring for "theoretical" reasons. Although they no longer directly stigmatize material incentives, they attempt to replace it by social interest, and this appears to be a kind of romanticism. They keep talking about dangers, keep issuing warnings, and keep telling people not to be carried away. In essence, what they are defending is not even centralism, but its carrier -- the administrative apparatus.

Nevertheless I feel that it is not those enumerated groups that have been acting as the chief inhibiting factors. Their resistance could have been easily swept away by a mass movement of the workers resting upon the will of the party leadership. But the fact of the matter is that this movement in favor of the new management system has not yet taken on the proper scope.

It has not taken on scope since, for decades, when planning from what had been achieved, we involuntarily taught even the best workers, the best brigades, and entire plants and kolkhozes, rayons and oblasts, that we cannot rush on ahead, because if we do, they will give us an even bigger plan next year.

But the most alarming thing is the caution that has been demonstrated by the average people -- both the workers, and the engineers and managers. In my opinion, their position is explained by the fact that they are receiving a certain amount of unearned income.

Usually one understands by the term "unearned income" the income of a bribe-taker or speculator. But, in my opinion, the basic flow of unearned money, most frequently, is the unearned income of the average people. The fact of the matter is that the average workers, kolkhoz members, managers, scientists, doctors, and engineers receive part of their earning (not infrequently a considerable part) not in exchange for the final results of their labor, but in exchange for a percentage of plan fulfillment, for an amount of time

worked, for the position filled, or the learned degree. For example, a certain NII [scientific-research institute] was abolished. It had had plans, a competition, and all the public organizations, had held "voskresniki" [unpaid Sunday workdays], and had issued wall bulletins. But the main thing had been absent -- a real return on their efforts. And although the workers at that NII considered themselves to be the most honest workers and actually had not violated a single law, they had inflicted damage on the country (directly by spending money, and indirectly by not guaranteeing technical progress) that perhaps was much greater than the damage inflicted by a speculator or a bribe-taking director.

These are completely obvious situations. But how many situations are there that are not so obvious, in the form of overstaffed institutions or wages and bonuses for fulfilling a low plan?

Sometimes it is said there is no such unearned income, since most people earn little. But whether they earn a lot or a little is of no significance in this instance. I can receive very little, but still it is not for high final results of my labor. Consequently, I am living -- partially or to a large extent -- on unearned money. It is the worry about this guaranteed income which, even though it is not very large, is not linked with the results of their labor, it is the worry about their "salary," that makes workers passive when changing over to the new system.

As a result we now see workers and employees who, deep within their hearts, do not yet want the restructuring, who prefer to get the "bird in the hand," instead of looking for "two in the bush." Certain enterprise managers are completely satisfied with the present system, when it is not necessary to get an accounting of one's actions, or to take any risk. But passivity in the basic production link is the base that makes it possible also for economic managers to continue to exist even though they are directly impeding the restructuring.

Who, then, wants the changes? They are the far-sighted political leaders and economic managers, the foremost figures in science and culture. They understand that in the twenty-first century the present version of development will become dangerous for our country. They are, furthermore, the advanced part of the working class, the kolkhoz members, engineers, and technicians, who are striving to improve their life, who want to earn more, but by their own labor, without any deals. They are the segments of the intellectual class who have a self-interest in scientific-technical progress.

For the time being, the restructuring has been proceeding slowly. In order to speed it up, it is necessary to find the appropriate mechanism. The congress decision has mentioned what will have to be done. We must make the maximum use of material incentive in order to increase the activity rate of the human factor. And in order to do that, we must change over all the labor collectives to complete cost-accounting, and must give them independence in current management, and, if necessary, also in the sphere of expanded reproduction.

Simultaneously it is necessary to isolate the tasks which the enterprises themselves are either completely incapable of resolving or will perform over a longer period of time and at a less effective rate than the central agencies. That is, the center, freed from the problem of labor turnover and of operational guidance, must direct its efforts to the resolution of the fundamental problems of scientific-technical progress. To a certain extent this will remind people of the maneuver that was developed during the NEP period: the expansion of independence at the bottom level, so that all the strengths at the upper level can be concentrated on the future, on industrialization.

And now a few words about acceleration methods. People sometimes advance the idea: let's not touch anything, but only pay more for an increase in labor productivity and the quality of output. Outwardly this seems reasonable, but, practically speaking, it is difficult to implement this scheme. First of all, there is a kind of lag between the increase in productivity and the possibility of purchasing goods with the increased wages. As a result there will be an even greater growth in the money supply, and this only discredits the acceleration. This method can become the basic one in the future.

But currently another scheme is more desirable. At the first stage, in my opinion, it is necessary to get rid of the policy of equalization when distributing the blessings already existing in the consumption fund. That is, it is necessary to increase the payments given to the best workers by reducing the income received by the worst workers. As everyone knows, we do not generally reduce earnings. And that is undesirable. The basic work of overcoming the policy of equalization in redistributing income must be put into the hands of the labor collectives themselves. This approach will appear to be unjust to those who would like to live without exerting themselves. But without aggravating the interrelationships in the collectives it will scarcely be possible to unfold a real mass movement in favor of restructuring and acceleration.

In the first part of this article I mentioned certain insufficiently developed methodologies. It is very important for the instructions to be developed after the issuance of the directive decisions to correspond to them in full measure and not to make the understanding of those decisions more difficult, but, rather, to help to implement them.

And, finally, a few words about the procedural mechanism of acceleration. The restructuring presupposes a radical change in the functions and rights of the central economic agencies. And if that is so, then those agencies probably will not be able to become genuine creators of the new economic mechanism unless they have been radically restructured.

Gosplan specialists, for example, are able to make any recommendations, other than those that will require cardinal changes in their functions and, consequently, the "purging" of their personnel. Minpribor [Ministry of Instrument Making, Automation Equipment, and Control Systems] makes all kinds of recommendations for restructuring in the operation of other ministries and

departments, but will not recommend reducing, say, to one-third the size of its apparatus in order to attract workers who are capable of using the economic methods.

To use V. I. Lenin's words, it is especially important "for the best elements that exist in our social system --- namely, the advanced workers, first of all, and secondly, the elements that are actually enlightened, on whom one can rely that they will not take a single word on trust, and will not say a single word against their conscience -- not to be afraid to admit any difficulty and not to be afraid of any struggle to achieve a goal that has been seriously set for themselves." It is necessary to encourage those who honestly want changes, to put in an untenable situation those who intend to "sit things out," and to remove from their jobs anyone who has been actively impeding the restructuring or attempting to replace it by an administrative dodge posing as an economic mechanism.

Today we have a correct policy and a clearly defined goal. And it is necessary to apply all our efforts to achieve that goal.

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## LIVESTOCK AND FEED PRODUCTION

### 1986 BSSR-LiSSR LIVESTOCK PRODUCTION COMPETITION TOTALS

Minsk SELSKAYA GAZETA in Russian 17 Jan 87 p 1

Report by Belorussian Central Statistical Administration:  
"Five-Year Plan Front: Results of Socialist Competition Between  
Workers of BSSR and LiSSR in 1986"

#### Excerpt 7 III. IN AGRICULTURE

(Kolkhozes, sovkhozes and interfarm enterprises)

	Belorussian SSR	Lithuanian SSR
Average milk yield per cow in kilograms	2754	3570
Egg yield per laying hen - units	254	248
1986 production in percent of 1985 for:		
Meat	107	103
Milk	108	103
Hen eggs	103	113
Average milk yield per cow	110	104

## LIVESTOCK AND FEED PROCUREMENT

### KAZAKH PASTURAGE DECLINE INDICATED

[Editorial Report] Alma-Ata BILIM ZHANE ENGBEK in Kazakh No 12, December carries on pages 6-7 a 1,700-word article by Qayypzhan Sortanbayev, candidate in agricultural science, senior research worker of the Kazakh Meadow and Pasture Scientific Research Institute, published under the rubric "Science for the Food Program," entitled "Pastures--The Shepherd's Mode of Production." The article looks at on-going efforts to solve the critical problem of declining pasture fertility in the KaSSR. According to Sortanbayev, the KaSSR's approximately 103 million hectares of pastures (56 percent of 183 million total in the USSR) provide too small a percentage of livestock food (about one-fourth), thus constituting a critical limit to development of animal husbandry in the KaSSR. He shows, however, that experiments indicate that a much higher percent is possible from careful, planned pasturage use. This would include seasonal pasture rotation.

/8309  
CSO: 1832/414

## TILLING, CROPPING TECHNOLOGY

### IMPACT OF INTENSIVE GRAIN CROP TECHNOLOGY IN BELORUSSIA

Minsk SELSKOYE KHOZYAYSTVO BELORUSSII in Russian No 10, Oct 86 pp 10-11

[Unattributed article: "Grain Fields -- Lessons of the Year"]

[Text] The problem concerned with increasing the production of grain has been and continues to be a key problem in farming. This is borne out by the recently adopted decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Measures for Raising the Stability of the Country's Grain Economy and Increasing the Grain Forage Resources During the 12th Five-Year Plan."

The participants at a republic seminar-conference held at the Order of the Red Banner of Labor Kolkhoz imeni Gastello in Minskiy Rayon discussed methods for achieving the efficient use of resources invested in the intensification of the grain economy and for increasing the production and procurements of grain, under the conditions imposed by the new economic mechanism in the agro-industrial complex. A report was delivered during this conference by the chief of the Main Administration for the Production and Processing of Field Crop Husbandry Products of Gosagroprom for the BSSR, A.M. Starovoytov.

"The measures which we have employed throughout the republic for intensifying the grain economy" he noted, "have produced definite results. This year, 85 farms obtained more than 40 quintals of grain per hectare, 11 farms -- more than 50 and the Progress Kolkhoz in Grodzenskiy Rayon -- more than 59 quintals. The kolkhozes and sovkhozes in Grodno Oblast reached the 30 quintal level and those in Brest Oblast -- 28 quintals. Fine grain crops were obtained on many farms in Minsk Oblast. The experience of leading farmers once again underscores the fact that high yields can be obtained through zealous management of the land.

At the same time, many kolkhozes and sovkhozes did not achieve their planned indicators and some obtained only 12-14 quintals of grain per hectare. And indeed the grain growers are confronted by very important tasks during the 12th Five-Year Plan. They must raise the average annual gross yield of grain to 8.4 million tons or practically double its production, that is, they must obtain not less than 1 quintal of grain for each point-hectare. In order to achieve this and cope successfully with implementation of the Food Program, the remaining farms must be raised to the level of leading farms.

A very real task is that of obtaining an average yield of 31-32 quintals of grain per hectare throughout the republic by 1990 or raising it by 6-7 quintals compared to the level already achieved. The potential and material resources required for accomplishing this are available at the kolkhozes and sovkhozes. In the interest of improving operations out on the land, these resources must be utilized in a more complete manner and all unused reserves must be placed in operation.

Today it can be stated boldly that the future in farming belongs to intensive technologies. This year, almost 1.8 million hectares of grain crops, or 61 percent of the overall area sown, were cultivated using these technologies. As a result of intensive factors, the increase in winter grain crop yield amounted to 6.5 quintals, almost equal to the increase recorded on the spring crop fields. However, for the republic as a whole, 8.3 fewer quintals of grain were obtained from intensive fields compared to the amount called for in the plan.

Why did this happen? As is known, the intensive technologies require strict fulfillment of an entire complex of scientifically sound agrotechnical measures. Only when these measures are carried out is it possible to realize the full biological potential of the crops under cultivation. The violation of just one of these requirements can negate the work carried out by farmers. And this means that additional expenditures will be in vain.

An operational analysis has shown that the greatest number of derelictions are occurring in Vitebsk and Mogilev oblasts and also in a number of rayons in Gomel and Minsk oblasts. The entire complex of technological operations associated with the cultivation of grain crops was not carried out fully in these areas: the optimum sowing periods were not observed, instances of low quality work were tolerated and the norms and ratios for nutrients were not observed when applying fertilizers and pesticides. There were many instances of unfinished work in the area of soil preparation and mineral fertilizers and plant protective agents were employed in a crude and ignorant manner.

In Vitebsk and Mogilev oblasts, autumn plowing was carried out on 30-45 percent of the land following the best periods and spring plowing was carried out following the best periods on considerable areas in Beshenkovichskiy, Sennenskiy, Krasnopol'skiy, Klimovichskiy and Chausskiy rayons (on from 15 to 60 percent of the land). Less work was carried out here in connection with stubble removal and bastard fallow soil cultivation. The seed and its preparation were worse (only 65 percent of the seed was disinfected). Many farms carried out their grain crop sowing work over a period of 33-35 days. As a result, the grain growers obtained only 15-20 quintals of grain per hectare.

On farms in Beshenkovichskiy, Dubrovenskiy, Lioznenskiy, Glusskiy, Khotimskiy, Chausskiy and other rayons, the recommended dosages for applying mineral fertilizer in behalf of winter and spring grain crops cultivated using the intensive technology were not followed. Here the fertilizer was applied in strips and nobody adjusted the machines for the assigned norm. And what explanation can be given for the fact that barley was sown at the Gorodokskiy Sovkhoz-Technical School in Gorodokskiy Rayon in the absence of a pre-sowing

application of starter dosages of phosphorus fertilizer, despite the availability of granulated superphosphate? Can reference be made to a shortage of these fertilizers when in fact 80 kilograms of active phosphorus agent were applied to the rows during sowing instead of the required 15-20 kilograms per hectare? These two extremes bother the conscience of the agronomists. In this instance, they reflect the skill level of the field technologists and their responsibility for the overall task.

Or let us take still another example of the attitude of personnel towards their work. Everyone is aware that the cultivation of grain crops using intensive technologies presupposes the mandatory application of split dosages of nitrogen fertilizer in accordance with the results of leaf diagnosis. What action was taken by the grain growers in Orshanskiy and Tolochinskiy rayons, who were required to apply a second top dressing to winter grain crops on areas of 8,000 and 6,000 hectares respectively? They applied a top dressing to the winter grain crops a second time using only nitrogen and only on areas of 4,700 and 3,600 hectares. This is how they decided here to control the growth and development of the plants and the formation of the crop.

The value of plant protection measures aimed at achieving high and stable yields increases as grain production is further intensified. Moreover, as further improvements are realized in optimizing the phyto-sanitary condition of the crops, through the selection of resistant varieties and systems of agrotechnical measures, reductions will take place in expenditures for the use of chemical means for combating pests and diseases. It bears mentioning that practically all of the oblasts were supplied with chemical preparations in complete satisfaction of their requirements. There remained only the need for ensuring that they were used in an efficient manner. However, such was not the case in all areas.

In late June, as a result of frequent rainfall, there was a greater incidence in all areas of helminthosporiosis, powdery mildew and other grain crop diseases. The specialists attached to the agrochemical service in Grodno and Brest oblasts and in majority of rayons in Minsk Oblast took the right action in the face of this situation. They utilized all available technical means for treating the crops with fungicides. In this manner, the further spread of infection was halted. However, the farms in Vitebsk Oblast performed in a very sluggish manner during this tense period; they treated only 56.6 percent of their crops with fungicides. And in Vitebskiy, Lepelskiy, Dubrovenskiy, Tolochinskiy, Chashnikskiy and Glubokskiy rayons, 30 percent of the crops were treated during the best periods.

The management of the Mogilev Oblast Agroprom [agroindustrial committee] carried out a great amount of preliminary work in connection with the introduction of intensive technologies. It organized practical seminars at the Kolkhoz imeni Dzerzhinskiy in Bobruyskiy Rayon and at the Kolkhoz imeni Volodarskiy in Mogilevskiy Rayon, during which all of the inputs for the harvest were reviewed in an intelligent and understandable manner. However, it turned out that the final goal of these measures did not produce the desired results. Only one half of the barley sowings was treated with Tilt and Bayleton during the best periods in Goretskiy, Belynichskiy, Kirovskiy, Mogilevskiy and Cherikovskiy rayons. In Shklovskiy Rayon, the oblast's grain

region, owing to irresponsibility on the part of the supply service of rayselkhozhimiya and a lack of control by the RAPO [rayon agro-industrial association], the kolkhozes imeni Kalinin, Put Kommunizma, Rassvet, 50 Let Oktyabr and Progress generally overlooked the best periods for tending their crops owing to a lack of Bayleton and Tilt (they were not even imported).

The republic's scientific-research institutes are playing a special role in connection with mastering the intensive technology for the cultivation of grain crops. Certainly, there is no single recipe for all of the farms and there cannot be one. But corrections for recommendations, depending upon the situation, are considered to be the direct responsibility of all of the institutes. Unfortunately, owing to the drought conditions experienced this year, our scientists were unable to orient the production workers towards the intelligent use of pesticides. They did not exercise proper control over the use of the integrated system for plant protection.

Despite the fact that all 47 experimental bases and support farms were allocated fertilizers and chemical means in full satisfaction of their requirements, they nevertheless were unable to produce significant yields. Thus, at the Belousovshchina Experimental Base in Pruzhanskiy Rayon, use of the intensive technology produced an increase in grain of only 1.4 quintals per hectare and at such bases as Ustye in Orshanskiy Rayon and Dashkovka in Mogilevskiy Rayon generally no increase was obtained. The question might well be asked what is the level of farming and management in these areas, if the operational results are lower than those being obtained at conventional rank and file farms? What type of scientific-methodological assistance are they receiving from scientific institutes?

And there is still another example. The Kolos Scientific-Production Association was called upon to integrate the latest achievements of scientific-technical progress and, based upon its own operational results, to motivate the kolkhozes and sovkhozes into achieving higher goals. But alas, today the Kolos has itself fallen behind. Its farms are obtaining 30 or less quintals per hectare. It can be stated directly that the results are not for science. Today, dozens of rayons throughout the republic and Grodno and Brest oblasts on the whole are obtaining more than 30 quintals.

A great role is played by the Selkhozhimiya Service in solving the problems concerned with increasing the yields and stabilizing grain production. The role played by this service has increased immeasurably with the introduction of intensive technologies. The intensive technologies require precision work with fertilizers, herbicides, fungicides and other means for regulating plant growth and development and the formation of the harvest. This service is performing a great amount of work throughout the republic.

At the same time, a very detailed evaluation of the work being performed today by the republic's Selkhozhimiya Service would bring to light some very serious complaints against its workers. In some areas, the specialists attached to this service are still not organizing, in a timely and high quality manner, the execution of their own complex of operations for providing the kolkhozes and sovkhozes with agrochemical and chemical protection services.. Thus, many farms are making poor use of their plant protection

agents and, as a result, weeds abound out on their fields. This service needs to be reorganized. The chief basic criterion for evaluating its activity must be the final result -- the amount of crop obtained on a farm and not the volume of work carried out.

Organic fertilizer is an important factor with regard to stabilizing grain production. A positive trend is being observed throughout the republic as a whole in connection with increasing the production of this fertilizer and applying it in behalf of winter grain crops. As a result, the average annual rate for the accumulation of humus in the soil during the years of the 11th Five-Year Plan was 867 kilograms per hectare. However, a substantial change is needed aimed at improving the quality of the composts. This problem can be solved only by improving their preparation and converting over to summer and autumn applications of 40-50 percent of their volume.

There are farms which apply organic materials mainly during the summer and autumn period. Such is the case at the Krasnaya Zvezda Breeding Sovkhoz in Kletskiy Rayon. Last year, such action made it possible here to obtain 62.4 quintals of feed units per hectare of arable land, or 8.3 quintals more than that obtained in 1982. In monetary terms, the reimbursement per ton of organic material amounted to 1.57 rubles instead of 0.91 rubles per ton (1982). During the current five-year plan, each kolkhoz and sovkhoz must be converted over to this method.

In addition to raising the fertility of the soil and observing technological discipline, an important role in increasing the production of grain is played by the varieties employed. Optimization of the varietal structure implies the use of a differentiated approach for selecting them. A definite amount of work is being carried out in this regard. For example, the proportion of early-ripening barley varieties in the sowings this year was raised to more than 30 percent. Over the past few years, new and highly productive varieties of spring and winter grain crops of Belorussian breeding have been regionalized.

And still the proportion of these varieties in the sowings is low.

The sowing qualities of the seed have been improved in all areas in recent years. Practically all of the seed has been raised to the 1st class sowing standard. At the same time, in order to obtain uniform seedlings and sowings during the intensive cultivation of crops and optimum purity in a productive plant stand, all seed production work must be subordinated to the task of obtaining seed with a high germinative energy and initial growth strength, so as to ensure complete germinative capacity. This includes mainly the thorough grading of seed for uniformity, a reduction in damage to the seed and incrustation, the creation of carry-over funds for the winter crops, especially for the northern and eastern regions, and other measures. In order to solve these tasks successfully, the logistical base for seed production must be strengthened.

The rates for raising the fertility of soil in many regions are still lower than those planned. Thus a minus humus balance has been noted on 200 farms in Klimovichskiy, Dyatlovskiy, Dobrushskiy, Polotskiy and a number of other

rayons. The amount of highly acid soils has increased. It can be stated directly that a thrifty attitude is not being displayed towards the fields in all areas. These are just a few examples.

Over the past 20 years, more than 740,000 hectares of land used earlier for haying and pasture purposes and also as arable land have become overgrown with underbrush or light forestation, or they have become swampy. This includes (during the past five-year plan) 5,000 hectares in Gorodokskiy Rayon, 2,700 hectares in Dubrovenskiy and Vitebskiy rayons and so forth. Over a period of a number of years, there has been almost no increase in the productivity of a renovated hectare of land. It is in this area that we have tremendous reserves.

In order to prevent future shortcomings, the grain growers must draw correct conclusions from the lessons of this current year and they must not repeat former mistakes in farming on the whole or in the grain economy in particular.

Towards this end, the agro-industrial committees and associations must develop and implement a system of measures for the training and retraining of personnel in the mass professions, leaders and specialists and they must leave a broad path open for the use of leading technologies and the collective contract. Each labor collective must do everything possible to ensure the successful carrying out of the tasks assigned during the 27th Party Congress and accelerated growth in the production of grain, feed and animal husbandry products.

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## TILLING, CROPPING TECHNOLOGY

### CORRECT USE, VALUE OF CROP ROTATION PLANS STRESSED

Minsk SELSKOYE KHOZYAYSTVO BELORUSSII in Russian No 12, Dec 86 p 14

[Article by V.S. Zinchenko, director of the Belgiprozem Institute and V.S. Zhmako and V.A. Gusakov, workers attached to the Western Branch of the State Scientific Research Institute of Land Resources: "A Scientific Basis for Crop Rotation Plans"]

[Excerpts] Science and practical experience have proven that thoroughly sound crop rotation plans ensure considerable increases in yields. At the same time, expenditures are lowered, better use is made of equipment and labor resources and more gross output is produced per unit of space. Crop rotation plans make it possible to carry out agricultural production on an intensive basis while continually improving the fertility of the soil.

The extensive use of organic and mineral fertilizers and other factors of intensification is serving to expand the structure for predecessor crop arrangements in the cultivation of many agricultural crops. Their correct alternation in a crop rotation plan makes it possible to utilize more fully the biological factors of the plants. They can have a positive effect on the humus structure and content in the soil and they can lower substantially the degree of soil exhaustion and also the spread of weeds, pests and diseases among the crops.

The efficient execution of plans for converting over to and mastering crop rotation plans is of exceptional importance. Unfortunately, by no means are these requirements always being carried out in all areas. We are still encountering mistakes in planning. Tracts are often included in the crop rotation plans and on some fields which differ in terms of soil conditions and this precludes the possibility of common soil fertility even with differentiated applications of fertilizer.

In recent years, in the republic, corrections have been introduced into the plans for intra-farm land management, which took into account the introduction into operations, at kolkhozes and sovkhozes, of progressive forms for organizing labor and for utilizing agricultural equipment. As a result, the

number of crop rotation plans declined by almost twofold and the average area for fields increased by a factor of 2.2. Even more substantial changes were carried out in Vitebsk Oblast, where production conditions are often limited by a light contour and sharply expressed relief.

Data obtained from monitoring the implementation of land management plans and particularly the mastering of crop rotation plans testifies to the presence of irregularities in the processes taking place. In particular, difficulties are being encountered in carrying out this work on farms where the crop rotations were enlarged in the absence of any consideration of the soil conditions. As is known, at one time there was no justification for the principle of one crop rotation plan for one farm. It was assumed that large fields create the best conditions for equipment operation and that they ensure the introduction of new progressive forms for labor organization. However, a light arable land contour and the separation of populated points by no means always produce the desired results.

The new solutions (number of crop rotation plans for a farm by oblasts fluctuates from 1.7 to 3.8) called for in the plans are creating the best foundation for the efficient organization of a territory, under conditions involving the intensification of agricultural production. But even here further corrections are possible. In the process, it should be noted that by no means is the re-ridging of fields in kind required in all instances. Crop rotation plan fields with different soils can have an independent alternation in time in accordance with different systems, upon the condition that the required sowing structure is maintained.

The introduction of abbreviated programs for alternation and crop rotation plans with a small number of fields will also promote the retention of large dimensions for cultivated tracts and the efficient use of equipment under intensive farming conditions. Great importance is being attached to including intermediate crops in the crop rotation plans. They increase the feed yields substantially, they serve as a means for enriching the soil with organic material and they reduce weediness among the crops and also the degree of infection by root rot. Thus the sanitary condition of the soil is improved. Winter rye grown for green bulk produces fine results in intermediate sowings. Mustard, oil-bearing radishes, winter rape, wild cabbage and lupine can be used as post-harvest intermediate crops.

It bears mentioning that the incomplete mastering of crop rotation plans and also failure to attach proper value to their use under intensive farming conditions are explained by subjective factors. However, there are also some objective factors. Owing to a shortage of seed, very little perennial grass is being sown. On many farms, a large portion of the winter crops is being grown following stubble predecessor crops. The conversion over to annual sowings of clover is being carried out very slowly. As revealed by experiments carried out at BelNIIIZ, they surpass by 17-22 percent, in terms of productivity, a clover-cereal grass mixture in the second year of its use. In

addition to increasing the gross yields of feed, they also promote to a large degree a campaign against weedy fields and they enrich the fields with nitrogen. Rapid solutions for these problems will enable the grain growers to obtain a higher return from each hectare of arable land and successfully carry out their plans.

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## POLICY, ORGANIZATION

### PROBLEMS OF IMPROVING CONSTRUCTION INDUSTRY ORGANIZATION

Moscow SOTSIALISTICHESKIY TRUD in Russian No 12, Dec 86 pp 7-17

[Article by V. Illarionov: "The Tasks Are Dictated by Time"; first two paragraphs are SOTSIALISTICHESKIY TRUD introduction]

[Text] Decrees of the CPSU Central Committee and USSR Council of Ministers were adopted this August on further improvement of management of the country's construction complex and on further improvement of the economic mechanism in construction. They outlined a number of major steps aimed at radical improvement of the capital investment process and at strengthening and development of capital construction. In addition to strengthening centralized guidance in this sector, considerably broader rights were granted to councils of ministers of union republics. Republic construction ministries have been transferred to their direct jurisdiction, local authorities are being made more accountable for fulfillment of plans and for integrated socioeconomic development of republics, krays, and oblasts. Other measures were also envisaged to further increase the efficiency of capital construction as one of the leading segments of the economy.

The articles which follow relate the problems and tasks of the construction process in the light of the present-day requirements.

Nezavershenka (unfinished construction)...this term long ago became a common noun that is often encountered. In 70 cases out of 100 deadlines are not met for activation of projects or are extended because of late delivery or low quality of the technical documentation or irregular delivery of equipment to clients. If we also add the disorder in the organization of the work of the builders themselves the picture we get is a gloomy one: the remainder of the estimated cost of the projects which have been started is now equal to almost five annual plans. The disproportionate size of the nezavershenka suggests that capital construction has not until very recently been subject to sufficient central management. In part that has indeed been the case. The sector has been broken up into a number of components which, to use a figure of speech, did not fit together along a number of edges.

The tasks which have been defined by the 27th party congress--to shorten by between one-third and one-half the time required for construction and reconstruction projects--put emphasis on the problems of improving the planning of

the sector. The plan is supposed to become a strong mobilizing factor guaranteeing proper organization, strict order, and a regular pace in the construction process. But when the plan does not have sufficient scientific substantiation and has not been worked out in all aspects, it objectively becomes a brake on the sector's economic development. It is sufficient to point out that in recent decades the builders have not had balanced plans that took into account the capacities of organizations operating on contract, project plans and estimates have not been supplied, and material and technical supply has not been efficiently organized. The program regularly included a volume of construction known to be unfeasible: just let the work begin, then we will see where we stand, we will make corrections. But no one ever got around to seeing where things stand. And that is how it happened that there is unfinished construction for the next 5 years hanging like a heavy load on the state's economy.

One has to be quite definite in admitting that the restructuring is still going slowly. This very year plans called for activation of nearly seven times as many projects in the 2d half of the year as in the first 6 months. And the builders know that in practical terms the 2d half of the year really means the 4th quarter. It is in the last months of the year that most of the projects near completion are activated. When we take into account that construction on many of them is lagging considerably behind schedule, then once again the country will even now not be receiving many dozen factories and plants, and other sectors and branches will in turn be left waiting for their products. Thus beginning with the mistakes of the plan and the delays of construction work, the snowball of mismanagement rolls on further, getting larger and larger.

The decrees adopted by the CPSU Central Committee and USSR Council of Ministers on improvement of construction open up broad opportunities for optimization of planning. They need to be taken advantage of without delay, without putting off the restructuring to an indefinite future. The ways to solve the problems are well known. About 26,000 production projects are being built at the same time in the country. Approximately 18,000 of them are projects with a value of less than 3 million rubles each. In the aggregate they do not exceed 5 percent of the total estimated cost of construction projects for production purposes. The other 95 percent of the volume of capital investments are going to build large capacities which are truly crucial to development of the country's industrial and economic potential.

It is altogether feasible to monitor the financing, the supply of project plans and the progress of construction of especially important projects using present-day computers. These are the projects that should first be included in the unified system for planning capital construction for the entire economy. The computer can store in its memory data on each of the approximately 3,100 construction and installation trusts. Should there be any change in the parameters, the information can be revised quickly.

This kind of system will make it possible for the recently organized union-republic USSR State Construction Committee, Gosplan, Gossnab, Stroybank, and the USSR Central Statistical Administration, ministries and departments, councils

of ministers of union republics, main administrations, associations, enterprises, and trusts to quickly obtain data on every construction project in excess of the limit, i.e., whose estimated cost exceeds 3 million rubles. If the system is set up properly, it is possible to easily obtain summary data on the aggregate of projects in a sector or branch, on the group of construction projects in any region, territorial-industrial complex, or related to a comprehensive target program.

Thanks to the unified system for planning capital construction and uniform principles as to methods, technical principles, mathematical principles, and legal principles, it is possible to make the transition from fond wishes for linking plans in sectoral and regional breakdowns to the capacities of construction contractors to the practical solution of this problem. Under the present conditions of restructuring in the sector realistic conditions are being brought about to accomplish this. Planning agencies now have a realistic opportunity to determine the volume of capital investment and contract work not on the basis of the level attained and under the pressure of external factors, but so as to take into account the actual need for them. The USSR Construction Committee and union Gosplan will be able to concentrate capital investments and resources on those construction sites which have paramount importance to the national economy, on particularly important projects in various sectors of the economy, and, very important, to maintain partial construction to be carried over at the standard level allowed.

A unified system for planning construction output is not a panacea against all evils, but it is a means of bringing about the necessary order in the sector, of putting order into the entire construction process. Plans for contract work and assignments for activation of capacities and projects must conform strictly to the financial resources and the material-technical resources which have been allocated to the builders; in other words, they must be realistic.

The planning and material-and-technical supply of construction is an uninterrupted process. As soon as there are substantial shortcomings in planning, this inevitably affects the supply of construction sites. The material-and-technical supply system in the construction sector is very complicated and cumbersome, and in certain units it manifestly contradicts the principle of scientific management in the sector. What happens: the builders, who still do not have all the project plans and estimates, are required to submit to planning and supply authorities requisitions for material-and-technical resources half a year in advance. It is on that basis that stocks are determined, and then they are repeatedly revised. Everything that is needed is released on a quarterly basis, or at best in monthly allotments. The technology and sequence of construction operations are hardly taken into account at all here. This practice quite often causes dislocations and interruptions in the construction process.

Construction sites must be supplied with everything they need on a planned basis through the nationwide system of material-and-technical supply. The need for those resources is determined by project plans and estimates. Conversion of construction projects to supply through regional supply authorities is quite often being dragged out through the fault of USSR Gossnab and also

because in working up the documentation for building projects the project planning institutes are still operating in the old way and are not counting on the needs of the construction projects for materials and resources, while in sectors and at construction sites proper records are not being kept on their consumption. This is also standing in the way of linkage of construction schedules to supply plans.

A clarification is needed at this point. The set of project plans for most construction sites does not include a document from which it would be possible to determine what resources in what amount have to be delivered to the construction site by what date. Policy-making authorities have commissioned the Scientific Research Institute for Construction Economics to work out that kind of method, but it has allowed this work to drag on.

The situation with the planning of construction projects and the supply of construction sites is compounded by the fact that the activity of various participants in the capital investment process is at present being evaluated separately, not according to the end result, but according to the intermediate result. Physical resources have up to now been planned for construction organizations not on the basis of the actual need, but on an average basis per million rubles of the volume of work. But since projects are not the same in their materials intensiveness and labor intensiveness, there is a surplus of resources at some sites, and a shortage of them at others.

Efficient material-and-technical supply of construction is one of the decisive conditions for successful performance of the construction program of the 12th Five-Year Plan. It has to be emphasized that along with the increased demand on plants manufacturing equipment and suppliers of other products and on the authorities of USSR Gossnab, there should at the same time be incentives for regular and complete supply of materials and equipment to the projects under construction. At present incentives of that kind are not having much effect.

Participants in the capital investment projects must under the new conditions establish mutual relations on a strictly economic basis. Enterprises making fabricating components for construction will make complete deliveries of their products provided the contractor pays them not for the individual parts and items, but for the full technological sets of fabrications. The activity of transportation components and administrations responsible for machinery should be evaluated not by ton-kilometers and the number of abstract hours of work, but according to the level of service rendered to trusts operating as general contractors, which today by no means unify in a single person the responsibility for activation of projects. In short, the discipline of the plan must become a strong implement toward acceleration and higher efficiency of capital construction.

#### A Boundary Is Worse Than a Knife

Construction crews have more to worry about than improving planning and material-and-technical supply. The actual organization of operations at construction sites is in need of greater order, if not something more. Let us go back to the brigade. Hardly any of the specialists will question the proposition

that the form of management that has prevailed in the sector until recent months was actually unable to provide full employment to all the brigades at a particular construction project, which means that it was also unable to guarantee that projects were activated within the allowed period of time. The reason for this is that at present there is no single boss at the construction site. There is a general contractor, but subcontracting organizations are not subordinate to him, and each receives its supply and reports on its work to its own department.

In order to create an uninterrupted flow even in housing construction, which is relatively well adjusted, there must be not only the contract brigade doing general construction, but also analogous mobile crews for installing utilities, for internal comforts and external amenities, for roads, plumbing, wiring, heating, and other work, from organizations which install elevators, monitoring and measuring devices and automation to the installing of telephones and gas supply. In all, there are quite a few of them! At large industrial construction projects there may be as many as 30 organizations under differing subordination. And in that complicated chain it is enough for just one link to be weak to nullify the efforts of many people. It is not easy to find who is at fault in such a situation.

The outdated system of management on the construction site needs to be radically revamped. The effective functioning of the construction assembly line in all likelihood required strong primary construction and installation organizations specialized in the type of construction and incorporating sections for the principal types of work to be done. Then there would be a single boss on the construction site who would be responsible for the economic technology of the operations and for uninterrupted supply. It is precisely that kind of large administration--the firm "Bratskgosstroy" that built the Bratsk and Ust-Ilimsk industrial complexes. And then in the light of that experience similar associations (firms) built the huge motor vehicle plants in the cities of Togliatti and Brezhnev. Unfortunately, the dissemination of this valuable experience is going extremely slowly, and one might even say reluctantly.

The method of integrated site development by large associations operating as contractors is taking on particular importance as large-scale construction shifts to the remote regions of Siberia, the North, and the Far East. It is here that it makes the most sense to have one large organization perform the whole range of construction work. In essence these may be capable firms which have direct ties with project planning institutes and supply authorities, who deal with a single customer. At present it is a rare exception to have such large organizations in remote regions.

There is a great deal of untapped potential for increasing the efficiency of capital construction being discovered during various experiments in which project planners, builders, personnel of the building materials industry, and the construction fabrication industry and other services take part. Experiments like that, by synthesizing the efforts of staff members of scientific and project planning institutions and production personnel, make it possible to apply the advances of scientific-technical progress and progressive know-how in practice.

The greatest benefit in improving the management of operations has been achieved in housing construction. There have been quite a few innovations here. There is a system of 2-year continuous planning and flow-line production, creation of the staff service of the single client in large cities, the conversion of housing construction combines to the start-to-finish flow-line contract following the method of the Tallinn and Belaya Tserkov housing construction combines, the delivery of housing for use with guaranteed quality passports, etc.

These experiments are important and necessary, but this is the trouble: not a single one of them has distinguished itself by solving the problems of integrated construction at a smooth pace, of construction development of cities and rural settlements according to approved plans and on time, at the lowest cost. And this is coming to be the main thing in the light of the decree of the CPSU Central Committee entitled "On the Main Lines for Acceleration of Solution of the Housing Problem in the Country," which was adopted this April.

The facts are persuasive as to the need for an essential restructuring of housing construction and civil engineering. The country has more than 520 housing construction combines. Their total annual capacity is 60 million  $m^2$  of total floor space per year. This is approximately 54 percent of the housing activated every year. We are still building nearly half of the housing units with traditional brick and other materials that come in small pieces. Moreover, every square meter of floor space costs 17 rubles and 10 man-hours more than when housing construction is industrialized. On the scale of the entire country this means hundreds of millions of rubles a year. We should also note that manual labor does not bring much prestige, and young people are reluctant to go into stone masonry, finishing work, and certain other labor-intensive operations. The character of labor changes with industrialization. It not only becomes highly productive, it is also more attractive.

The load on the capacity of housing construction combines is approximately 80 percent. If they were brought up to their rated output, it would be possible to build approximately 12 million  $m^2$  more housing per year. By the end of the 5-year planning period the capacity for large-panel housing construction is to increase to 67 million  $m^2$  of housing per year. In rural housing construction as much as 37 percent of the housing will be built by industrial methods as compared to 24 percent in 1985. At those growth rates one of the most important tasks is to accelerate attainment of the rated output of urban and rural housing construction combines.

Specialists have defined the two main lines of intensification of housing construction and civil engineering. First, in housing ministries and departments, many of them believe, there need to be subdivisions for centralized major repairs of processing equipment, forms, and jigs and fixtures, and in the future intersector services of this kind should be organized. That would put an end to primitive small-scale methods and the immense overexpenditure of resources and materials on repair work within housing construction combines, and repair time would be cut to one-half or one-third. Second, the combines need centralized supply of replacement assemblies, parts, and components and an additional stock of gear used in construction; the need for these things is

increasing with the expansion of the list of factory-made products as they master the building of housing in the new design series, especially in remote areas. Third, within Minstroydormash, whose enterprises manufacture equipment for all housing construction combines, it would make sense to create a centralized subdivision for startup and adjustment and to delegate to it the functions of overseeing installation, as is the practice in building many enterprises in other sectors of the economy.

The efficiency of housing construction also increases when small enterprises are unified (regardless of their departmental subordination) to form regional combines and assign the tasks of integrated urban and rural construction on the scale of the region. It would also be advisable to create urban construction combines. This would be a major new step in development of a viable system of housing construction enterprises. The idea of creating such combines is supported at many official levels, but the goals proclaimed and the true goals are not always one and the same. Under the new conditions of the organization of the construction process this issue ought to be moved from the sphere of problems into the category of specific practical business.

This progressive idea could be implemented without particular difficulties or upheavals. There have been similar things, and there could be modifications. For example, there is the activity of the large scientific-production association "Prokatdetal" of Glavmosstroy. Its collective is involved in experimental housing construction and civil engineering in the capital. This NPO includes among its components a large design office, two plants for manufacturing reinforced-concrete products and structural fabrications, two construction and installation administrations and an administration for fitting out production plants and processing installations. In addition to experimental construction the collective of "Prokatdetal" joins forces with the project planning institutes of MosglavAPU in solving a range of project planning and scientific problems involved in designing and applying in production the prototypes of new models of large-panel residential structures and cultural and consumer service facilities and to improvement of the quality of off-site manufacturing of buildings and the methods used in construction and installation work. Recently the association activated about 600,000 m<sup>2</sup> of housing and public buildings. The economic benefit from the development projects of this collective's specialists was all of 55 million rubles. Author's certificates have been issued in the association to cover more than 70 developments, and more than 15 patents have been obtained in 11 countries.

The many years of experience in experimental design and construction of "Prokatdetal" has confirmed the high effectiveness and correctness of the pattern adopted for management of the construction process. The activity of researchers and designers, of the personnel of the construction fabrication industry, and the builders, with no delays for those who complete the project planning and research cycle, is subordinate to a single objective and is oriented toward the fastest attainment of the end results at the lowest cost. The average length of the cycle from project planning through production of structural fabrications to erection of the new projects is 1.5-2 years. Usually this takes 2-3-fold more time.

Numerous delegations have come to Moscow for experience, but the experiment conducted in the capital has not been applied elsewhere in practice. On the other hand it is being quickly and effectively put to use in certain other socialist countries.

Taking into account the high efficiency of the activity of the association "Prokatdetal," the possibility should be examined of setting up analogous scientific-production associations in the country's various regions and major industrial centers. It would above all be advisable to organize them using the facilities of the extremely large DSK in Leningrad, Kiev, Alma-Ata, Donetsk, Kharkov, and other cities. This alliance among science, project planning and construction is a strong catalyst for scientific-technical progress in the sector.

The problem of consolidating construction subdivisions came to a head long ago. We now have an innumerable number of very small organizations, even in nonconstruction ministries. This is one reason why the process of concentrating construction work has slowed down; in a number of places its efficiency has dropped, and there is an unjustified overexpenditure of large material and technical resources. It has become an oddity. In Sverdlovsk Oblast reinforced concrete was being manufactured at 40 some plants under 13 different ministries. In Smolensk Oblast, Gorkiy Oblast, and many other oblasts of RSFSR building has been done by 30-35 organizations belonging to different departments. And as a rule each of them had its own industrial facilities, machinery administrations, motor pools, and numerous auxiliary services. Because of this kind of fragmentation there were only 4-5 workers for every person in administration and management. In very small organizations the utilization of equipment is 30-40 percent lower, manufactured fabrications and parts are disproportionately expensive and are often of low quality. Yet the main thing is that these dwarfish organizations are unable to build up-to-date enterprises on time.

The defects of the departmental patchwork are evident in the process of carrying out comprehensive target programs or the development of major new regions. For instance, since the beginning of the effort expenditures for reconstruction of the Nonchernozem Zone of RSFSR has run into tens of billions of rubles, but they have not yielded the expected return. The model villages which were supposed to be examples for large-scale development in all 29 oblasts and autonomous republics of the Nonchernozem can literally be counted on one's fingers, and even they were built mainly in the vicinity of very large cities. The output of construction in rural areas has been low. Again the principal reason lies in the separateness of those involved. Every contractor, and in the region patron organizations alone come from more than 20 republics and oblasts, receives its assignments in rubles and stated volume of the work item, and there is no interlinkage to coordinate all of the work being done in a given region or oblast. Each does its work, files its report, and the people out there couldn't care less.

Now that this problem is being solved through the system of Gosagroprom, the situation will really be corrected. But how much time has been lost and what resources have been overexpended! And if we look to the demographic aspects

of the problem, the problem of mismanagement becomes still worse: if only now the people would come back to the deserted villages!

There is no other explanation than solely these departmental civil wars for the fact that "naked" canals, as the reclamation people call them, stretch for hundreds of kilometers in the steppes and semiarid areas of Central Asia and Kazakhstan. Yet the plans called for new oases to grow up at those places and for the land of dozens of sovkhozes and kolkhozes to be made fertile. The builders did work that was profitable in rubles and went away, and there was no one to be concerned about integrated rebuilding of the steppes. Now this has to be returned to. But now the mistakes of past years have to be paid for!

The slogan "The BAM is being built by the entire country!" has become a popular expression. That is in fact the case. But in essence what they have been doing is just to build a railroad. Development of the social infrastructure has been lagging many years behind. The time for developing the extremely rich areas adjacent to the main railroad line has been postponed by just as much, if not more: the necessary production facilities have not been built for a full-scale offensive on uninhabited areas, nor have many other problems been solved. The organization of intensive construction in these places is simply unthinkable otherwise.

To our great misfortune these examples are by no means isolated. The losses run to the billions of rubles. It is true that a boundary is worse than a knife. And the faster one eliminates it, the greater the benefit to the state.

#### The Real Problem of the Day

The decrees on improving the management of capital construction and on raising the level of economic management have been advancing a number of urgent problems. They have to be solved so as to take into account the errors committed earlier and also so as to take into account the valuable experience that has been gained in many places. It should be noted that so far the sector has been managed after the production-regional pattern. This has led to organizational dislocations, has held back the rise of growth rates, has promoted a growth of construction in process and the failure to meet deadlines for activation of many projects. The previous system for management of construction was not sufficiently linked to the country's division into economic regions nor to the prospects for development of many regions, which gave rise to the patchwork in the activity of ministries and made it more complicated to plan capital investments. Difficulties also arose in building a strong and up-to-date production capability and in the flexible handling of resources.

In recent years, as the economic regions have undergone integrated development, the character of the work of construction ministries in their general configuration has undergone essential change in the areas assigned to them. The country's leading construction ministries--Minstroy, Minpromstroy, and USSR Mintyazhstroy--have been doing at least 15-30 percent of all the work items on the list defined above. Aside from that they have been carrying out

orders from other sectors of the economy. Under the impact of various factors, quite often because of localism, the energies of the contractors are scattered, the number of construction sites has grown unjustifiably from year to year. In certain construction ministries there are only 7-12 persons for each project being built. Nor is there any great interest in speed and continuous cycles, integrated flow lines and other organizational innovations.

With construction fragmented as it has been, one bad thing has gradually been deposited on top of another. When innovations that are really intensive in nature are applied in practice thanks to the efforts of enthusiasts, things like the decade-old Belorussian experiment in billing the customer for the entirely finished project, long-term credit financing of capital investments, the Orel "continuity," etc., they either gradually die out or in time they become formalities and are localized instead of becoming disseminated everywhere. Any innovations are rejected by the old management mechanism as being incompatible with it and alien to it.

The concentration of efforts along the decisive lines in the sector has been hindered by the fragmentation and separateness of the construction subdivisions of various ministries, their remoteness from one another, and the related complexity of organizing the activity of the various participants involved. We will allude to an example of this. The republic Mintyazhstroy, Minpromstroy, and Minmontazhspetsstroy have been operating in the Ukraine along with the organizations of the former Minselstroy and Ukrmezhkolkhozstroy, which have been operating with the rights of ministries and were unified under Ukragroprom only in 1986. Why does the republic really need so many construction ministries, not to mention the subdivisions of dozens of other departments? And isn't it against all logic for the organizations of nearly 20 other departments to be operating in small mountainous Kirghizia in addition to the republic Minstroy and Minselstroy?

The measures which have been defined since the 27th party congress to improve the management of capital construction must put an end to the departmental patchwork. In the union republics major construction subdivisions directly subordinate to the councils of ministers are being created. In RSFSR the activity of construction ministries will be based on the regional-sector principle. Then there will not be such absurdities as, say, when one of the main administrations of USSR Mintyazhstroy directs three regional subdivisions in Komi ASSR, Vologda Oblast, and Kabardino-Balkar ASSR. Can it be possible to build a single strong industrial facility for them when they are separated by thousands of kilometers and each has a different geography?

Now the organizations of one ministry will do all the construction within a large region of RSFSR. The benefit from this is beyond doubt. Aside from the benefits solely related to construction, the full-fledged large organization operating as the contractor, whose activity will principally be evaluated not on the basis of the notorious "gross," but according to the acceleration of activation of projects, will also make itself felt by the other participants in the capital investment process, and it will oppose the simultaneous starting of hundreds of projects without sufficient technical-and-economic justification or production capabilities. The "nezavershenka," which has put

everyone's teeth on edge, will inevitably begin to shrink, and the conditions for its growth simply will not exist in the future.

When matters are organized after this fashion, the character of the large-scale regional construction organizations will be determined by the specific nature of each economic region. Since aside from work items in its particular specialized configuration, the major subdivision operating as contractor will perform within its zone all the principal types of work items, there is no longer a need to set up dozens of measly little organizations. As fragmentation is eliminated and the number of levels of authority reduced, the management of construction will be brought right to the construction site. Not only production problems, but also the socioeconomic problems of the work collectives, will be solved without delay. This will serve as the real basis for stabilizing personnel turnover and holding on to personnel.

At the same time certain major products (they can literally be counted one by one), where the share of specialized construction and installation work goes as high as 70 percent or more, like blast furnaces, batteries of coke ovens, specialized organizations of USSR Minmontazhspetsstroy can build them almost completely with its own resources.

In the future the structure of the subdivisions and subordination of USSR Minmontazhspetsstroy remain unchanged. It would accordingly be advisable to alter somewhat the character of the work done by this ministry (the set of work items it performs). It not only does specialized construction and installation work, it also installs prefabricated reinforced-concrete and other fabrications, and it does simple plumbing, wiring, insulating, bricklaying, and other operations. These lie altogether within the power of general construction organizations, especially such stable subdivisions as will be created in the regions to replace the small administrations and trusts. Turn that work over to the general contractors--this will simplify supply, and the fitters will be oriented exclusively toward performing work that is really in their narrow specialty. An end will finally be put to the Babel of subcontractors, whose operations have become unmanageable at a number of places. In such situations local party and soviet authorities usually come to the help of practitioners in the economy. Various staffs, coordinating councils, and promotion groups are created, but actually they possess no rights at all. An appearance is created of fervent activity to almost no purpose.

Now real opportunities are being created for developing the industrial base of construction according to a single plan for major regions or republics. Sensible use needs to be made of these opportunities: small enterprises should be unified or consolidated, enterprises should be brought closer to places where new construction is taking place, cooperation should be organized, there should be a sharp reduction of crosshauling, and wherever possible the gradual transition should be made from small production operations which at times are almost primitive to up-to-date highly mechanized and automated plants. It should be made their duty to produce sets of fabrications from highly efficient materials, not diverse products manufactured by the piece. It would be best to deliver those kits to construction sites in specialized vehicles. On that basis construction sites with their disproportionate expenditures of

manual labor and relatively poor mechanization would gradually be transformed into assembly and installation sites. The productivity of labor would increase substantially in that case.

Adoption of an effective system for management of construction as a single complex in the national economy will afford the possibility of cutting approximately in half the number of small organizations with their sizable managerial staff and will expose new potential for raising the productivity of labor, for speeding up operations, for reducing their cost, and for improving their quality. It is also quite realistic and necessary to organize the closest interaction among all the participants in the capital investment process--builders, customers, planners, suppliers, and financial backers--under the new system and with the more efficient mechanism for conducting economic activity. Then they altogether and each within his own respective sphere will really be responsible for the destiny of the construction project, not just in declarative terms.

#### Who Is the Boss at the Construction Site?

The destiny of all the plans and socialist obligations depends on those who are working in brigades, right at the work stations. That is why the most fixed attention has now been directed toward collectives at the lowest level; that is where many experiments face their test.

The effectiveness of every new innovation is verified above all in economic terms. The viability of the brigade contract that was born in the Moscow Area has been proven by experience over many years. The productivity of labor in contract brigades has been averaging one-third higher than in ordinary brigades. They have more order, the personnel are better qualified, and the quality of the work is better, the losses are smaller, and personnel turnover is lower. In cost-accounting brigades party and trade union organizations and Komsomol groups are active as a rule.

There are now more and more examples of the high return from the activity of contract collectives, but unfortunately so far they are not determining the main trends of development of construction work. As a matter of fact, if more than half of the brigades are working under contract, and labor productivity in them is one-third higher than in ordinary brigades, then this ought to have the most decisive impact on the overall state of affairs. But year after year the sector is not fulfilling plans, and in a number of regions the efficiency of capital investments is even falling off. Where is the logic here?

In capital construction, with the multiplicity of its internal and external relations, there is no getting away from the need to create highly efficient low-level subdivisions under the specific conditions of every construction site and to closely link the activity of all participants in the construction process. Any attempt to break down to whatever degree the unified process of the construction assembly line, to remove from its chain some one link, inevitably has the result that many departments are left outside, and full use is not made of the entire potential for intensification and optimization of production.

The larger collectives--sections under foremen and work superintendents, and then also trusts and housing construction combines--have begun to be converted to the progressive form of the organization of work and work incentives in the recent past. The collective of Trust No 18 of "Mosoblselstroy" was the first to make the transition to the new mode of operation in April 1984. Last year it fulfilled the plan with respect to all principal indicators. Labor productivity rose more than 20 percent over 1984 while wages rose 8 percent. The operating results were equally good at the Belaya Tserkov Housing Construction Combine in Kiev Oblast. This collective is also operating according to the method of the brigade contract and is not merely fulfilling planning targets with respect to all indicators, but has also been delivering housing for activation with nothing less than a good or excellent evaluation. Quite a few such examples could be cited.

Yet where the integrity of economic connections is disrupted, the adverse aspects are clearly delineated. Is it normal when ordinary brigades are included among those working under contract so that reports will look good? And their principle is this: you get a bonus if you fulfill the target assigned, but it is not so important when the project is turned over for use.

In other trusts, administrations, and housing construction combines an endeavor is being made to transfer more brigades to work under contract, but the conditions are not being created for them to work with a high level of productivity and fulfill the socialist obligations they assume. As a consequence 47 percent of the contract agreements are not performed because of poor material and technical supply, mistakes in project plans, and delays in delivery of equipment to customers. Here is a typical situation: If the brigade does not fulfill the contract, it is accountable for this in rubles, but if the obligations fail to be met by the managers of construction subdivisions, they actually bear no responsibility at all.

The decisions of the 27th CPSU Congress call for developing the brigade contract, enlarging brigades, and improving the organization of their work. The large contract brigade in construction should become the management unit. In order to increase the effectiveness of the brigade contract and to put an end to all kinds of padding, it would be advisable to keep records of the amounts of work items not according to contracts concluded, but exclusively according to contracts fulfilled. Moreover, records would be kept not of the percentage of assimilation of capital, but of the number of residential buildings, housing units, and production projects built on time and ahead of time and at a high level of quality. The contract collective must be issued the project plans and estimates on time not on a "gross" basis, but in conformity with the technological sequence of operations, and plans and amounts of work items should be set at sound levels. The contract brigade numbering some 50 or 60 people can perform 1 million rubles or more of work in a year, can sign a contract to build a large project, and can guarantee that it is activated, that is, it can become a true boss at the construction site.

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GOSPLAN OFFICIAL ON USSR CONSTRUCTION PROJECT PLANS

Moscow EKONOMICHESKAYA GAZETA in Russian No 2, Jan 87 p 4

[Article by V. M. Serov, deputy chairman of the USSR Gosplan: "Map of Key Construction Projects"]

[Text] On the page in front of you is a schematic map of the construction projects underway in 1987. It does not show all the projects now or soon to be underway, but will give you an idea of the scope of the construction program. The total amount of capital committed by the State this year is 172.4 billion rubles, or 8.4 billion more than in 1986. 165 billion rubles worth of fixed capital is planned to go in line, while the pace of existing plant retooling and reconstruction efforts will continue to be accelerated. Resources earmarked to accomplish this represent a 25 percent increase over last year's level. The growth of capital investment limits for all funding sources is planned to be at the 4.7 percent level. The plan has incorporated all proposals regarding capital funding obtained through enterprises' resource funds.

The 1987 plan represents a major shift toward expanding housing construction and social sector facilities. For the first time in recent years, non-production oriented construction will account for more than 25 percent of all building. Housing with over 126.2 million square meters of living space is projected for construction, pre-school facilities able to handle more than 881,000 children are on the schedule, secondary schools capable of accomodating another 1,284,000 students will be created, 73,000 hospital beds will become available, and outpatient clinics able to treat more than 182,000 patients per shift will begin operations.

In accordance with the decisions made by the 27th party congress, the capital construction plan for the second year of the Five-Year Plan has given priority to the machine-building industry and will provide all construction designated for this industry with the necessary materials and funding. In addition, the amount of contract-based work involved in these projects will be at appropriate levels.

Among those who have been given major tasks to accomplish are builders of experimental units, proving plants, pilot production facilities, and research stands for priority work necessary for scientific and technical progress. This

list also includes facilities belonging to interbranch scientific and technical complexes. These facilities are dealt with in a separate part of the plan.

Within the tool building industry, preference has been given to expanding capacities for manufacturing automatic and semiautomatic robot and computer operated production lines. And there will be an increase in the output of forges and presses that permit the introduction of waste-reducing technologies.

After the Leningrad Metallurgical Plant and the Kharkov Turbine Plant are modernized, the output of steam turbines will increase. Considerable production capacities will go on line at diesel engine and diesel generator facilities in Barnaul and Khabarovsk. In addition, capacities will be added in Kalinin, to permit expanded production of railroad freight cars, and at the Kolomensk Diesel Locomotive Plant, to put more diesel locomotives on mainlines. Finally, Uralmash [Ural Machine-Building Facility] will put new large-capacity shovel excavator production shops into operation.

Capacities for production of the following will be beefed up: AC electric engines, large pieces of electrical equipment, mainline electric locomotives, and other electrical equipment.

Plans include accelerating expansion of production of sophisticated equipment for chemical industrial processes, as well as increasing output of high-performance equipment for oil-production, drilling, oil exploration, and oil and gas processing.

The automobile industry has a busy schedule for projects already underway. These include expanding, renovating, and retooling many enterprises.

In 1987, key areas of interest will be those industries manufacturing machinery for agriculture, livestock raising, and feed production. The growth in capacities in these areas will amount to almost one billion rubles. Among the entities to be affected by this will be complexes already under construction at the Tula Combine Plant, Bashselkhozmash [Bashkir Agricultural Machinery Plant] in Ufimsk, and at plants in Rostov, Tselinograd, and other locations.

**Fuel and Energy Complex:** New turbines will go on line at the Smolensk, Balakovo, Zaporozhe, and Khmelnitskiy nuclear power stations, as will the second unit at the Yuzhno-Ukrainskiy AES in Nikolaev Oblast. Construction of thermal power stations running on cheap local coal, primarily from open mines, will be stepped up. Most of this will take place at the Ekibastuz and Kansko-Achinskiy fuel and energy complexes. In addition, there will be expanded construction of thermal power stations running locally on natural gas from the Tyumen deposits. These power stations are the Pechorskaya (in the Komi ASSR), Permskaya, and Surgutskaya GRES's.

In 1987, the petroleum and natural gas industries will undergo a significant expansion of capacities. Among the projects included as part of this are: the second section, 3,000 kilometers long, of the Yamburg--Yelets gas pipeline;

the Yamburg--western border area pipeline, which will be 2,900 kilometers long; and the Okha--Komsomolsk-Na-Amur, Ananev--Tiraspol--Izmail, and other pipelines.

New mines, cuts, and separating plants, in Siberia and the Far East for the most part, will enable the coal industry to increase its coal production capacities by more than 23 million tons.

**Ferrous Metallurgy:** In order to increase the production of iron and manganese ore, new capacities will be introduced at mining and separation complexes in Kustanayskiy and Belgorodskiy oblasts, in the city of Marganets in Dnepropetrov Oblast, and at the Ken-Tobe mine in Karaganda Oblast.

By increasing the amount of steel made in acid converters and furnaces and rolled using the continuous casting method, the steel industry will undergo significant structural improvements. Capacities will be introduced at the Cherepovetskiy Metallurgical Complex, the Dalnevostochniy Plant (in Komsomolsk-Na-Amur), and the Kramatorskiy Metallurgical Plant. Efforts to overhaul rolling mills will draw to a close at the Chelyabinskii Metallurgical Complex and at enterprises in Dnepropetrovsk, the city of Volzhskiy, Sverdlovsk Oblast, and Belorussia.

Fixed capital in the coke and chemical industry is being replaced, while additional capacities are being provided for the scrap metal processing industry.

The chemical and petrochemical industries are planning to step up the pace at which facilities already under construction are completed. These new facilities will produce ammonia, mineral fertilizers, sulfuric acid, synthetic resins, and plastics.

In order to provide more of the consumer goods that are needed, cotton spinning and weaving factories will be built in the Azerbaijan, Tajik, and Moldavian SSR's. Knitted and sewn goods factories are planned for Yerevan, Poti, Michurinsk, Saratov, Makhachkala, Tomsk, and Kiev. And shoe factories will go up in Kaluga, Moscow, Togliatti, Mogilev, and the Uzbek and Lithuanian SSR's.

Among the industries that are part of the agro-industrial complex, the program to finish started facilities is aimed at improving the system for processing agricultural products and preserving food once it is processed. Industrial capacities will become operational at sugar mills and meat and dairy complexes in Krasnodarskiy kray, Ufa, Nalchik, Novosibirsk, Samarkand, and the Dzhambulskiy, Saratovskiy, and Vitebskiy oblasts.

We must also mention the transportation network, especially in Siberia and the Far East areas. Construction of the Severo-Muyskiy tunnel on the BAM will continue, and the new Chara--Tynda, Tynda--Urgal, and Nizneangarsk--Chara railroad lines will begin operations.

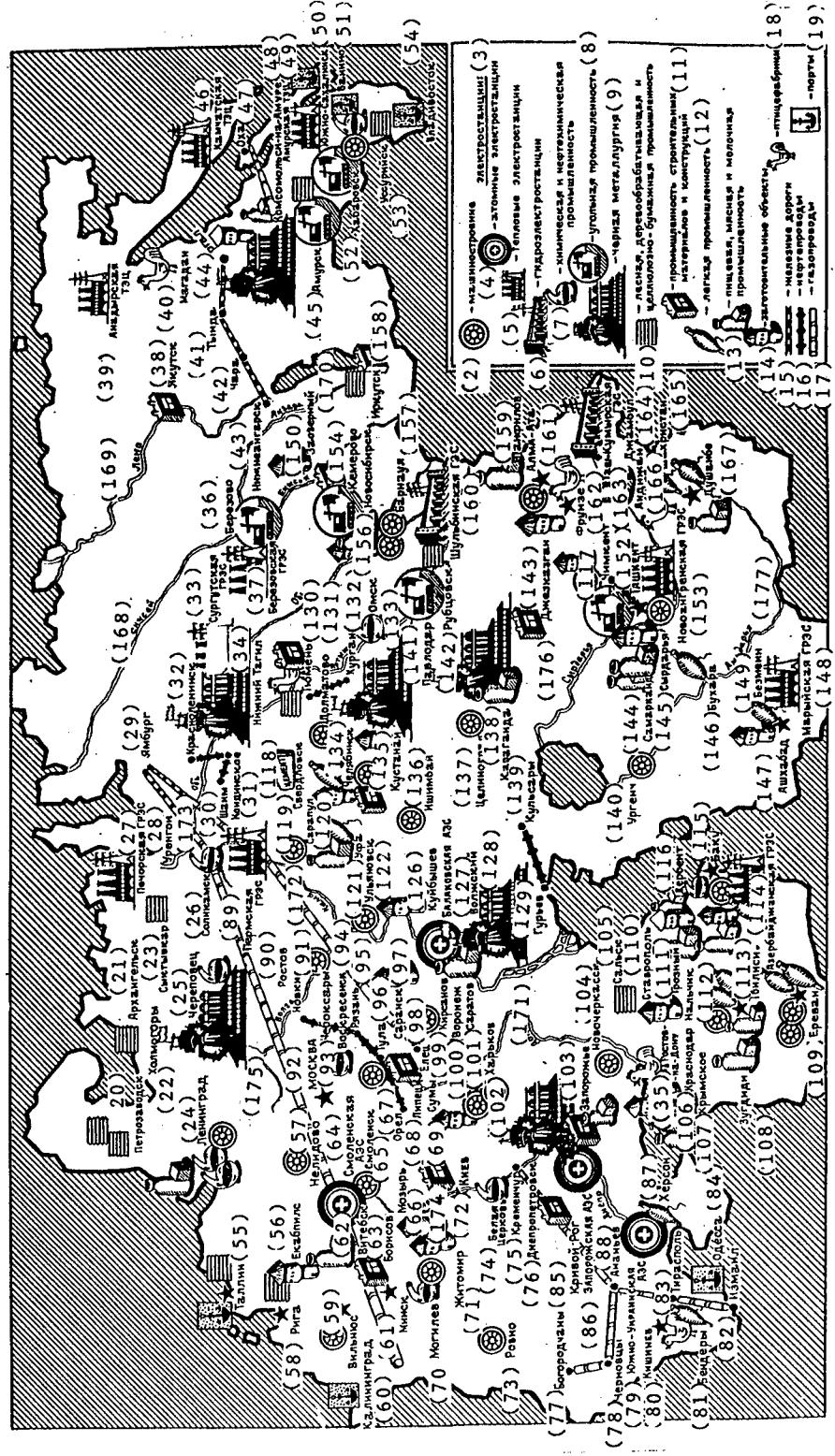
The total amount of paved roads will increase by 15,000 kilometers.

The construction materials industry will start up plants able to produce high-performance cellular concrete wall materials, foam plastic, high rigidity mineral slabs, and natural stone facing material. Novokuznetsk, Lipetsk, Irkutsk, Yakutsk, and Krivoy Rog will all add capacities to their building construction complexes. This will set a good foundation for providing the materials necessary to implement their extensive program of housing and public facilities construction.

The construction industry will become more completely industrialized, with the number of buildings made from factory produced products increasing. This year will mark the first production run of Molodechno-type modular buildings, each with between four and ten thousand square meters of floor space. These buildings are equipped with overhead cranes capable of carrying ten tons, and are ready to serve as shops within a machine-building enterprise in essentially every respect.

We are confident that the second year of the Five-Year Plan will be concluded successfully, partly because of these steps, and partly because of the radical changes the construction industry's operational techniques are undergoing, efforts to provide workers with more material motivation to finish projects on time, and a policy of giving collectives more responsibility for and authority in their job performance.

(1) Пукоовы с мроук и 1987 20 да



Key on following page

**Key:**

1. Ongoing 1987 Projects
2. Machine Building
3. Power Stations
4. Nuclear Power Stations
5. Thermal Power Stations
6. Hydroelectric Power Stations
7. Chemical and Petrochemical Industry
8. Coal Industry
9. Ferrous Metallurgy
10. Timber, Wood Processing, and Pulp and Paper Industry
11. Construction Materials and Structures Industry
12. Light Industry
13. Food, Meat, and Dairy Industry
14. Billet Production Industry
15. Railroads
16. Oil Pipelines
17. Gas Pipelines
18. Poultry Production
19. Ports
20. Petrozavodsk
21. Arkhangelsk
22. Kholmogory
23. Syktyvkar
24. Leningrad
25. Cherepovets
26. Solikamsk
27. Pechorskaya GRES
28. Urengoi
29. Yamburg
30. Shaim
31. Kondiskoye
32. Krasnoleninsk
33. Surgutskaya GRES
34. Nizhniy Tagil
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38. Yakutsk
39. Anadyrskaya Heat and Electric Power Station
40. Magadan
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42. Chara
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47. Okha
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49. Amurskaya Heat and Electric Power Station
50. Yuzhno-Sakhalinsk
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54. Vladivostok
55. Tallin
56. Yekabpils
57. Nelidovo
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60. Kaliningrad
61. Minsk
62. Vitebsk
63. Borisov
64. Smolenskaya Nuclear Power Station
65. Smolensk
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67. Orel
68. Lipets
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70. Mogilev
71. Zhitomir
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73. Rovno
74. Belya Tserkov
75. Kremenchug
76. Dnepropetrovsk
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78. Chernovtsy
79. Yuzhno-Ukrainskaya Nuclear Power Station
80. Kishinev
81. Bendery
82. Izmail
83. Tiraspol
84. Odessa
85. Krivoy Rog
86. Zaporozhskaya Nuclear Power Station
87. Kherson
88. Ananев
89. Permskaya GRES
90. Rostov
91. Novki

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92. Moscow	133. Omsk
93. Cheboksary	135. Kustunay
94. Voskresensk	136. Ishimbay
95. Ryazan	137. Tselinograd
96. Tula	138. Karaganda
97. Saransk	139. Kulsary
98. Yelets	140. Urench
99. Kirsanov	141. Pavlodar
100. Voronezh	142. Rubtsovsk
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102. Kharkov	144. Samarkand
103. Zaporozhe	145. Syrdarya
104. Novocherkassk	146. Bukhara
105. Salsk	147. Ashkhabad
106. Krasnodar	148. Maryynskaya GRES
107. Krymskoye	149. Bezmein
108. Zugdidi	150. Zaozerniy
109. Yerevan	151. not used
110. Stavropol	152. Tashkent
111. Grozniy	153. Novoangrenskaya GRES
112. Nalchik	154. Kemerovo
113. Tbilisi	155. not used
114. Azerbaijanskaya GRES	156. Novosibirsk
115. Baku	157. Baranau
116. Derbent	158. Irkutsk
117. Not used	159. Panfilov
118. "Cement"	160. Shulbinskaya GRES
119. Sverdlovsk	161. Alam-Ata
120. Sarapul	162. Frunze
121. Ufa	163. Tash-Kumyrskaya Hydroelectric Plant
122. Ulyanovsk	164. Dzhambul
123. not used	165. Shakhristan
124. not used	166. Andizhen
125. not used	167. Dushanbe Rivers
126. Kuybyshev	168. Yenisei
127. Balakovskaya Nuclear Power Station	169. Lena
128. Volzhskiy	170. Angara
129. Gurev	171. Don
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POLICY, ORGANIZATION

1987 MOLDAVIAN CONSTRUCTION PROJECT PLANS

Kishinev SOVETSKAYA MOLDAVIYA in Russian 7 Jan 87 p 1

[Article by S. I. Moroz, deputy chairman of Moldavian SSR Gosplan: "The Republic Builds"; first two paragraphs are source introduction]

[Text] The second year of the Five-Year Plan, 1987, has been launched. And the construction industry has an even more important part to play in solving the massive problems associated with accelerating the economy at this new juncture. 1987 is a new stage in our history; once we have dealt successfully with the demands of this year, the republic and the entire country will be able to move even further ahead. A single year is no more than an instant in historical terms, but this brief interval will be of immeasurable importance to everyone who will be designing, building, and using the buildings and facilities planned for construction in that time. And the factor which will give this year most of its importance is that tomorrow's objectives will be vastly different from yesterday's.

SOVETSKAYA MOLDAVIYA has asked S. I. Moroz, deputy chairman of the Moldavian SSR Gosplan, to discuss the most important construction projects planned for the second year of the Five-Year Plan and the organizational and managerial changes that will take place within the construction industry.

First and foremost, we should note how full the construction schedule for 1987 is. You can judge for yourself. The amount of construction republic-level Minstroy [Ministry of Construction] construction organizations are scheduled for will be 23 percent higher than total amount of finished construction in the first year of the Five-Year Plan. This figure for the agro-industrial complex is 18 percent.

A key feature of the period starting this year is that capital will be given to construction projects already underway only as they meet schedule deadlines. For this reason, and in order to bring the Plan in line with the production capacities of construction organizations, 41 construction projects worth 87.2 million rubles have been mothballed in 1987.

Machine-building facilities will be expanded and overhauled as part of an agenda which will include putting new capacities in the Elektromash Factory in Tiraspol and beginning construction of the second unit at the trailer plant in

the same city. New capacities will also be constructed at the streetcleaning equipment plant in Faleshty.

These new capacities will result in greater output from the Benderskiy Silk Complex and the Brichanskiy Sugar Plant and allow the Kishinev Perfume and Clothing Factory to begin production. In addition, capacities at several other enterprises will be either constructed or expanded.

More than 52 percent of all industrial construction this year will be devoted to retooling and overhauling existing plant, while 14 percent will go for expanding currently operating facilities.

The social orientation of the construction program will become even more apparent. For the first time, 36 percent of total construction capital will be put into non-productive building. Educational, cultural, and health care construction will get 72 percent more funds than they did last year. Enough pre-schools will be built to accomodate 11,000 children, while the capacity of secondary schools will increase by 25,000. 1,100 hospital places will be created, out-patient clinics capable of handling 7,300 visits per shift will begin operating, and 63 obstetrics centers will start handling patients.

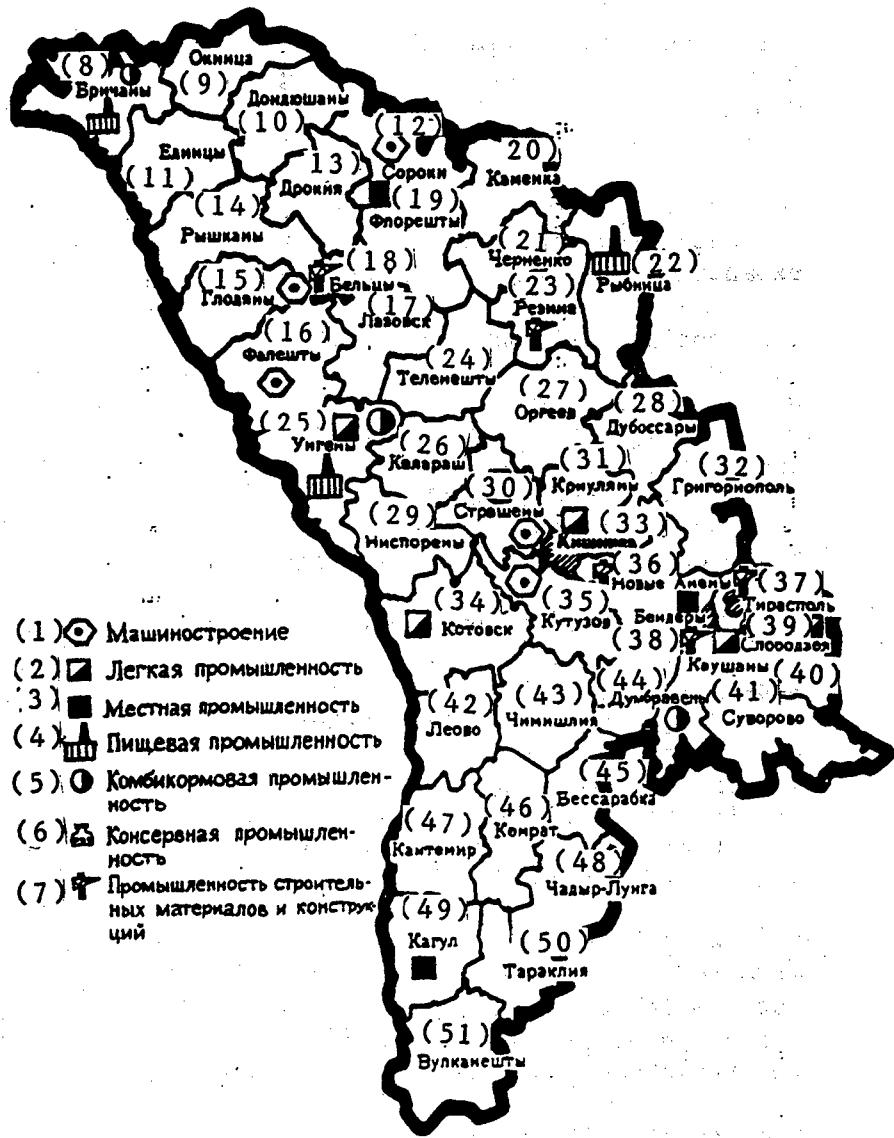
We will continue our policy of increasing the production capacities of construction organizations and enterprises manufacturing construction materials. To this end, 75 million rubles has already been earmarked for expanding the construction materials industry. This will permit the following: construction of an assembly unit at the Building Construction Complex No. 1 in Kishinev; completion of the renovation work on the materials production unit at the Monolitstroy; and expansion of KPD [large-panel housing construction] and high-performance plaster production in Beltsy. Construction work on the second section at the cement plant in Rezina will continue.

Naturally, changes in operational techniques will be an important element in efforts to improve performance of the construction industry. Among the key tools which will help in this regard are contract prices for construction and expansion of the cost accounting system. In addition, measures have been taken to strengthen the constituent units of construction organizations.

The construction industry of the republic has a full agenda of problems to solve. This being the case, success will result only if every manager, specialist, and worker moves forward without trepidation and assumes responsibility for learning as he goes. Indeed, each of them is obligated to do this if the state of affairs with respect to construction is to be solved now, as the 27th party congress has instructed us, and not at some point in the future.

Key:

1. Machine Building
2. Light Industry
3. Local Industry
4. Food Industry
5. Livestock Feed Industry
6. Canned Food Industry
7. Construction Materials and Structures Industry
  
8. Brichany
9. Oknitsa
10. Dondyushany
11. Yedintsy
12. Soroky
13. Drokoya
14. Ryshkany
15. Glodyany
16. Faleshty
17. Lazovsk
18. Beltsy
19. Floreshty
20. Kamenka
21. Chernenko
22. Rybnitsa
23. Rezina
24. Teleneshty
25. Uygeny
26. Kalarash
27. Orgeyev
28. Dubossary
29. Nisporeny
30. Strasheny
31. Kriulyany
32. Grigoriopol
33. Kishinev
34. Kotovsk
35. Kutuzov
36. Novye Aneny
37. Tiraspol
38. Bendery
39. Slobodzeya
40. Kaushany
41. Suvorovo
42. Leovo
43. Chimishliya
  
44. Dumbraven
45. Bessarabka
46. Komrat
47. Kantemir
48. Chadyr-Lung
49. Kagul
50. Tarakliya
51. Vulkaneshty



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POLICY, ORGANIZATION

NEW UKRAINIAN CONSTRUCTION MINISTRY CHARTS COURSE

Kiev PRAVDA UKRAINY in Russian 21 Jan 87 p 2

[Article by V. Pankratov: "Construction and Reform"; notes from a UkrSSR Ministry of Construction Collegium meeting]

[Text] Two ministries, formerly the Minpromstroy [Ministry of Industrial Construction] and the Mintyazhstroy [Ministry of Heavy Construction], have been combined into a single republic-level Ministry of Construction which will be responsible for overhauling active industrial enterprises and building new ones. It will also engage in housing and infrastructure construction throughout the republic.

The recent session of the Ukrainian SSR Minstroy [Ministry of Construction] Collegium and the Presidium of the republic construction industry labor union took a look at the outcome of the first year of the 12th Five-Year Plan and discussed objectives of the second. In 1986, complexes and trusts completed almost four billion rubles worth of contract work, more than 230 million rubles more than in 1985. More than 100 industrial facilities went on line, including production capacities at: the Khlorvinil Association in Kalush; the Sera Association in Yavorov; the Zhdanovskiy Metallurgy Complex imeni Ilich; the Bagleyskiy Coke and Chemical Plant; the Kharkov Tractor Plant; the Kherson Combine Plant; and other enterprises. More than 7,550,000 square meters of housing was completed, a total of 200,000 square meters over quota. The list of construction that was completely finished includes all planned hospitals, clinics, schools, vocational schools, and pre-school centers.

Nonetheless, these overall satisfactory results should not be allowed to keep us from seeing some serious problems. For example, not enough capital was obtained for constructing machine-building, ferrous metallurgy, or mineral fertilizer enterprises, which had, in order, 89, 88, and 83 percent of the capital they needed. And among the ten industrial facilities not built were such important ones as the No. 1 shaft at the Tavricheskiy Mining and Processing Complex and the Sumsk Textile Factory. Finally, the quota for the rate by which labor productivity was supposed to increase was not met.

This will not be an easy year. The Ukrainian SSR Minstroy contract work program will include 13.8 percent more construction than last year, for a total of 4,500,000 rubles. Among the projects envisioned for the year are 82

major industrial complexes and facilities. In addition, the amount of construction at ferrous metallurgy, petrochemical, heavy machine-building, and construction material production sites will increase by factors of 22.4, 24.5, 30, and 33.7 percent respectively. And we need to build more schools, housing, and hospitals than last year.

We have never before experienced the level of acceleration planned for the republic's construction organizations this year, which marks the 70th anniversary of the Great October Revolution. But this fast paced progress is the only way we will be able to solve the critical problem of reform. That is, only in this way will we be able to begin completing construction projects in accordance with normative time schedules. Moreover, only this approach will permit us to create the manufacturing reserves needed to permit timely acquisition of fixed capital.

At its session, the collegium analyzed the state of affairs with respect to construction. They noted that the situation in the construction industry remains generally unsatisfactory and that reform is progressing at a slow pace. Almost half of all complexes and trusts fail to perform in accordance with the plan. One reason for this is inertia; that is, the lack of initiative characteristic of certain managers who are untroubled by wasted effort and resources and who feel no sense of responsibility for the performance of their collectives.

We need to improve the performance of the construction industry, insure that it is at the cutting edge of efficiency and technical quality, and guarantee that it never fails to be in line with the plan. The only way to accomplish this is to have every level in the chain of command--from ministry to team--put heart and soul into implementing the reform and, consistent with the new spirit sweeping the country, take responsibility for the job entrusted to them. Those who should be in the front lines of responsibility include managers of construction units and production engineers.

Construction and facility start-up plans are law, and no one has the right to say that for one or another objective reason he is unable to carry out the plan. The idea behind the reform is that a solution to all problems, no matter how difficult, will be found. As Minister V. Salo stressed in his report and in other speeches, every organization has resources it can bring to bear on solving such problems. The implementation of a two-shift system is one example of such a resource. It does not involve excessive expense but yields a great deal in the way of return. That is, it can provide an alternative to the need to use low-productivity, high-maintenance, worn-out machinery. And finally, it can relieve the machinery and equipment shortages prevalent at many construction sites. Nonetheless, the vast majority of construction projects are not running their equipment at full capacity. Work pretty much comes to a standstill after the first shift is over.

This year marks the beginning of a process in the course of which the construction industry will ultimately adopt contract pricing. Contract agreements between buyer and seller will be drawn up for each project started, and the price agreed upon by them will remain unchanged during construction. Contract and engineering collectives will be the recipients of the bulk of the

money saved through cost reductions. The contract price system is becoming a powerful tool for ensuring the welfare of construction organizations and is laying the foundation on which their ability to reimburse their expenses will be built.

As the new economic system is implemented, unlimited opportunities for the use of the collective-level contract are appearing. Unfortunately, there are few people who believe in this progressive form of management which permits incentives offered to individual workers and collectives to be tied strictly to the ability to do the job agreed upon in the contract. The ministerial apparatus and managers of complexes and trusts are among the opponents of this system.

Yet even the limited experience of organizations within the Ukrpromspetsstroy [Ukrainian Specialized Construction Agency], Chernovitsstroy [Chernovtsy Construction Agency], and Sumzhilstroy [Sumsk Housing Construction Agency] is sufficient to show that collective-level contracts keep the pay scales of workers, engineers, and technical specialists closer together. In this way, such contracts keep the level of motivation high among workers and engineers. (This level is not nearly as high in the latter category as it should be.) Moreover, the contracts help make construction faster and cheaper.

At its meeting, the collegium made it perfectly clear that we have to give the idea of the collective-level contract a green light. This contract system is the most important element in our plans to make more effective use of the human factor in accelerating the pace at which construction is completed and new capacities and facilities go on line. It is also important for ensuring that quality is high, labor productivity goes up, and resources are used wisely.

Among the speakers from the Ukrainian SSR Minstroy Collegium were: Yu.P. Batalin, deputy chairman of the USSR Council of Ministers and chairman of the USSR Gosstroy [State Construction Agency] and B.V. Kachura, member of the Politburo and secretary of the Central Committee of the Ukrainian Communist Party.

Included among those who participated in the session of the collegium were: A.D. Dmitriev, deputy chief of the CPSU Central Committee Construction Department; P.Ye. Yesipenko, deputy chairman of the Ukrainian SSR Council of Ministers; and G.K. Zlobin, chairman of the Ukrainian SSR Gosstroy.

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## LABOR

### LABOR OFFICIALS ON PRODUCTIVITY, WAGES IN TRADE SECTOR

Moscow SOTSIALISTICHESKIY TRUD in Russian No 12, Dec 86 pp 47-52

[Article by V. Kizilov, chief specialist, USSR Gosplan, and M. Chekin, chief of the Trade Sector, USSR Goskomtrud [State Committee for Labor and Social Problems] under the "Labor and the Economic Mechanism" rubric: "Incentive System for Labor in Trade Is Improving"]

[Text] Raising the workers' standard of living is directly linked with the improvement of trade and is inseparable from the more complete satisfaction of the public's demand for various commodities and services. In the current five-year plan it is planned to increase by almost one-third the volume of retail commodity turnover in state and cooperative trade without taking into consideration the sale of alcoholic beverages. Fulfilling that task is no simple matter, especially since, at the present time, the activity of the enterprises and organizations in the branch and the level of trade services provided to the public do not conform to present-day requirements. Experience has shown that a major restructuring of the entire economic mechanism in the branch is needed.

The recently adopted decree of the CPSU Central Committee and USSR Council of Ministers, entitled "Improving the Planning, Economic Incentives, and Administration in State Trade and Consumer Cooperatives," was precisely aimed at resolving the problems that have arisen. Starting in 1987, a new management mechanism will begin operating in trade. That mechanism will affect practically all aspects of the activity of the enterprises (organizations), as well as the republic and regional agencies of administration of state and cooperative trade. This will include the improvement of the interrelationships between trade and industry, the expansion of the economic independence of the enterprises and organizations, increasing the self-interest of the labor collective in increasing commodity turnover and in improving the services provided to the public, etc. There has been a substantial reduction in the number of directive indicators, and an expansion of the area of application of the normative method of planning.

The organization and management of cost accounting are also undergoing fundamentally important changes. The factor that is becoming the basis of cost-accounting is income. That income is used to make payments to the budget and the superior agencies of administration in order to form centralized

reserves and funds, and also to make payments to banks for long-term loans; to repay other expenses that do not pertain to marketing costs; and to create a price-reduction fund for unpopular and shopworn commodities. The balance of that income is practically the sole source of funds for the production and social development of the collective, for paying for the labor performed by the workers both in the enterprises and organizations, and in the superior agencies of administration, including the trade ministries of the union republics. Cost-accounting in cooperative trade will be organized with slight differences resulting from the peculiarities of the interrelationships between the consumer cooperative system and the budget.

The new economic mechanism provides for major changes in the area of the payment of labor. Their chief goal is increasing the material self-interest in increasing the sale of commodities, in observing the established variety list for those commodities and the trade rules, and in improving the efficiency of the services provided to the public. These changes pertain not only to the shop workers, but also to the workers in the apparatus of the "torgs" [trade enterprises and organizations], trusts, companies, associations, and superior agencies of administration, including the trade ministries and the consumer cooperative system in the union republics.

Practical life has shown us that during the past five-year plan the retail commodity turnover per worker in the branch increased by almost 15 percent, but the average wages rose by only 4.4. percent. Thus, every percentage of increase in commodity turnover was accompanied by an increase in the basic wages of less than 0.3 percent. The procedure that currently exists in the branch stipulates two sources of payment for labor: the wage fund and the material incentive fund. The size of those funds and the payments from them are insufficiently coordinated with the volume of retail commodity turnover. The wage fund is determined on the basis of the official table of organization and the average wages, with a consideration of their possible increase. The size of the material incentive fund depends, especially in recent time, not so much upon the growth rates of commodity turnover as upon the planned volumes for profit and the structure of its distribution. By their nature these two funds do not have any substantial difference, although it is stipulated that the former one is included in the marketing costs, and the latter is formed from profit. Actually, however, they both are formed from the gross income of the enterprises (organizations). In our opinion, wages should correspond to the results of labor, with a consideration of the labor-intensity of achieving those results. For trade this means that the size of the wages should be determined primarily on the basis of the volume of the commodities sold.

An important place in the mechanism of labor incentives is occupied by the payment of bonuses. The bonus system that is in effect in labor does not orient the worker directly toward increasing the sale of commodities. It encourages him to strive for the fulfillment of plans in their monetary expression, and that effort is not necessarily aimed at overfulfilling them, inasmuch as the practice of planning commodity turnover from the achieved level does not promote the acceptance of intensive plans. In most instances the bulk of the bonuses is paid for the fulfillment of established indicators. This disturbs the dependence of the size of the wages upon the volume of commodity turnover, inasmuch as the size of the bonus remains identical if,

during the current year, the enterprise has overfulfilled the plan by the same percentage as it did during the previous year, although the bulk of the commodities sold increased substantially.

The CPSU Central Committee and USSR Council of Ministers decree on trade takes into consideration this persistent need for "capital repair" in the field of payment of labor.

In conformity with the new management conditions, a single source of wages is created -- the labor payment fund. The money in this fund is used to pay the wages on the basis of salary rates and tariffs, and piecework rates, and wage differentials and wage increases are established. The money in that fund is also intended for the payment of current bonuses, the payment of remuneration based on the work results for the year, and the payment of operations performed by the nonlisted personnel. In the event of a shortage of money in the single fund for those purposes (nonfulfillment of the planned indicator, considerable overexpenditure of markets costs, etc.), it cannot be compensated by bank credit. Only in the event of a shortage of that money for the payment of wages on the basis of rates and tariffs is it possible to use the money from centralized funds for the payment of labor which are available to superior agencies of administration, which, incidentally, are also used to pay the labor performed by the workers in those agencies.

The labor payment fund at enterprises and organizations is formed from the income remaining at their disposal after paying deductions to the budget and to superior agencies, and the payment of interest to the bank and of other mandatory deductions and payments. The fund is formed on the basis of quotas that were approved in the five-year plan. In republic and oblast agencies of administration, the money in this fund is formed from deductions from the labor payment funds of the subordinate enterprises and organizations.

As is well known, for production associations and enterprises of industry which were changed over to the new management conditions, the normative correlation between the growth rates of labor productivity and the average wages is approved as part of the five-year plan. In trade, however, the quota for the correlation between commodity turnover and the labor payment fund is established. This difference is not accidental.

First, the computation of the indicator "labor productivity" in trade does not yet have any reliable methodology. Even for a single enterprise, it is different to determine it in the dynamic situation, inasmuch as the size of the indicator is strongly influenced by the commodity-turnover structure and by the correlation between the expensive and inexpensive commodities.

Secondly, by no means all the methods of increasing labor productivity in labor, as computed for the enterprises and organizations as a whole as commodity turnover in terms of a single worker are acceptable. According to an evaluation made by specialists, under the conditions of the present-day development of trade technology, the labor of almost 75 percent of the personnel engaged in trade operations does not lend itself to mechanization. The temptation to achieve an increase in labor productivity by reducing the number of those personnel is, practically speaking, unacceptable, inasmuch as

in many instances this has a detrimental effect upon the efficiency of the services provided to the customers, and increases the consumption costs (the expenditure of time by the public to purchase the commodities).

When establishing the quotas for the correlation between the growth rates of the labor payment fund and the commodity turnover, it is very important to coordinate them with the piecework rates for individual commodities. Today, in order to determine the planned wage fund as a whole for trade, the correlation of the growth rates of commodity turnover and the wage fund has been assumed to be approximately the same that was assumed when constructing the rates for individual piecework rates per 100 rubles of actual commodity turnover. However, in practice, for individual enterprises (organizations) it is possible to have a different correlation with a consideration of the specific conditions of managing them. In these instances the size of the piecework rates per commodity must be determined in conformity with the quota for the labor payment fund.

It may appear to some people to be inefficient to recompute a considerable number of the rates per commodity, at a time when it is easier to correct the quota itself. This view is fundamentally incorrect. The quota is a part of the national economic plan. Its size is determined by many national-economic proportions, and primarily by the rate of provision with a fund for production and social development, and by the necessary material-technical funds. By its economic nature, the quota of the labor payment fund corresponds to that share of the income that remains at the disposal of the enterprise and organization that they can use to pay for the labor performed both by their own workers and by the workers at the superior levels who have been called upon to guarantee the normal running of the trade process.

Under the management conditions, the enterprise (organization) managers are granted broad rights in giving incentive payments to workers for achieving high indicators in labor. In particular, within the confines of the labor payment fund that is formed on the basis of the quota, one can introduce wage increases of as much as 24 percent of the workers' wage or salary rates for a high level of professional skill. These wage increases are established for salespersons, cooks, bakers, waiters, cashier-checkers, and other workers who provide exemplary services to the customers, who produce a broad variety of articles while observing the basic recipes and technological schemes for food preparation, the reduction of time expenditures, etc. Salary rates of as much as 230 rubles a month can be established for highly skilled workers (according to the lists of operations and occupations indicated by the appropriate superior organization) engaged in especially important and critical operations.

Wage increases of as much as 50 percent of the salary rate can be introduced for highly skilled engineer-technical workers and other specialists and employees of enterprises (organizations), as well as the agencies of administration of state trade and the consumer cooperative system, including the trade ministries and unions of consumer societies of the union republics. These wage increases, in the agencies of administration, are paid from the economizing of the labor payment fund that results from a reduction of the number of workers at those agencies.

There has been an expansion of the scope and an increase in the size of the additional payments to workers for combining occupations (positions), the expansion of the zones in which they provide services, or the increase in the volumes of the operations to be fulfilled. Unlike the existing procedure, the list of the combined occupations (positions) will not be approved by the superior agencies. Additional payments of as much as 50 percent of the salary rates can also be paid to commodity specialists, economists, and accountants who fulfill, in addition to their basic work, the duties of workers who are temporarily absent. In trade, where more than 80 percent of the total number of workers are women, this problem was the most acute one in recent time. These additional payments and wage increases are directly linked with the quality of the operations and the services provided to the public. If this condition is not observed, those payments and increases are not paid, and if there is a shortage of money in the labor payment fund they are reduced or cancelled completely.

With the purpose of consolidating the wholesale enterprises, as well as the trade enterprises, trusts, and unions of consumer societies, it is stipulated that, in the event that they exceed by a factor of at least 2 the indicators approved for the corresponding enterprises (organizations) in the first group for payment of the labor performed by managerial and engineer-technical workers and other specialists and employees, the salary rates of the workers whose salaries depend upon groups for the payment of labor, are increased by 15 percent.

At the same time the economic mechanism being introduced in trade contains an "antidote" to the excessive and unsubstantiated attraction to salary increases. It has been stipulated that they are all established within the confines of the labor payment fund that has been earned by the enterprise (organization), and therefore they are a direct deduction from the money in that fund that can be used to pay bonuses to workers, including managers who have been given the right to introduce those increases.

In order to develop the workers' initiative in improving the services provided to the public, to guarantee that the enterprises of trade and public nutrition will operate at times that are convenient for the customers, and to expand the seasonal sale of commodities, provision is made for the broader application of progressive forms of organizing and encouraging labor. The form that is becoming the basic one in the organization of labor in trade is the brigade form with payment of labor based on collective piecework rates by individual commodities and with the distribution of the collective earnings with a consideration of the trade contribution made by each person. The makeup of the brigade can include the directors and managers of stores, cafes, and other trade units, as well as engineer-technical workers and other specialists and employees. There has been an intensification of the material self-interest of the brigade leaders. Additional payments to unfreed [from other operations] brigade leaders who are workers have been established in amounts of up to 40 rubles a month, and to team leaders, up to 50 percent of the additional payment for a brigade leader.

A form that will become widespread is the contract form of organizing and encouraging labor under conditions of combining jobs. For trade in vegetables, fruits, juices, and seasonal commodities, and for the purchase, acceptance, storage, and processing of agricultural produce and raw materials, and the fulfillment of loading-and-unloading, repair, typing, and other operations, enterprise managers have been authorized to use the services, on terms of combining jobs, both of the workers in their own enterprise, including engineer-technical workers and employees and of those at other enterprises, institutions, and organizations during the time when they are free of work. The duration of the work on the basis of combining jobs must not exceed 4 hours in the course of a day, or a complete shift on the person's day off. Moreover, the total length of the work involving combined jobs, during the course of a month, cannot exceed half the person's monthly work time norm.

From the workers who have expressed the desire to work combined jobs one can create, on contract terms, specialized or complete brigades. At such time the brigade collective or the individual worker concludes with the enterprise administrators a contract that indicates the specific volume of operations, the fulfillment deadlines, and the requirements on the quality of the work, and the amount of the labor payment fund that is set aside for the particular volume of operations. Provision is made for the duties on the part of the administrators and the responsibility borne by the brigade (individual worker) for the fulfillment of the contract pledges, the intactness of the assets and funds, the observance of labor discipline, etc. Their labor is paid for on the same conditions that were established for the basic workers at the enterprise. Persons working combined jobs (other than engineer-technical workers), simultaneously with leave from their basic occupation, are granted leave from their combined work in proportion to the amount of time worked. The limitations for working combined jobs apply only to persons younger than 18 years of age, as well as managerial workers at the enterprise (organization) and their deputies.

Another form that will develop is the contract form of organizing and paying for the labor on contract principles. This form is being introduced for purposes of improving the services provided by the workers, and guaranteeing the operation of enterprises of trade and public nutrition at a time that is convenient for the public, primarily in remote populated points, as well as on motor highways, at health resorts, and in other places with large numbers of tourists and people on vacation.

The contract is concluded with the collective at the store, section, department, cafe, snack bar, cafeteria, pavilion, or with an individual vendor carrying or conveying items for sale, or maintaining a booth, shop, kiosk, acceptance station, or other subdivision in enterprises of trade and public nutrition. In the former instance, provision is made for collective (brigade) material responsibility, and in the latter, complete, individual material responsibility.

With this form of organization of labor, the workers are issued commodities and materials representing value, stock, and tools, and the necessary equipment is permanently assigned to them. The wages are computed on the

basis of the completed results of the labor, irrespective of the size of the collective, on the basis of a quota, from the income remaining at the disposal of the collective (individual worker). The collective distributes the overall wages independently, with a consideration of the labor contribution made by each individual, as a rule, with the application of a KTU [coefficient of labor participation]. For persons working on a contract basis, additional payments and increases are established for a high level of proficiency, occupational skill, for nighttime work, and also for work that is divided into two shifts with a break of more than 2 hours on the conditions that are in effect at the particular enterprise. Contract collectives and individual workers sometimes can independently increase the length of the work day. Provision is made for the possibility of having family members of the workers who have concluded a contract participate in the work. Those who do so are not included as part of the official personnel at the enterprise. Persons working under terms of contract forms of the organization of the payment of labor include persons working at home, those working combined jobs, those working an incomplete work day, retirees, and students.

Large duties are entrusted to the administrators of enterprises of trade and public nutrition. They must provide the collectives and individual workers with commodities, equipment, and stock, work clothing, packing and packaging materials, semifinished products, and advertising, must carry out the repair of the provided areas, and must pay promptly the wages stipulated by the terms of the contract that was concluded.

It is completely obvious that the introduction of the contract form of labor must be preceded by explanatory and preparatory work that is linked with improving the system of planning, accounting, and control, with the organizing of the supply of commodities, material-technical support, the establishment of quotas, etc.

There has also been an expansion of the independence of the enterprises in the area of incentives. The indicators, terms, and size of the bonus paid to workers, engineer-technical personnel, and other specialists and employees are established by the administrator after coordination with the trade-union committee independently, proceeding from the need to fulfill the planned indicators. There has been a change in the mechanism for paying bonuses to managerial workers. Numerous conditions for the payment of bonuses are being eliminated. The bonuses will be paid, as a rule, on the basis of indicators that do not depend upon one another. Also, the bonus for fulfillment of the indicator that reflects the basic activity of the enterprise (organization) must constitute no less than half the total size of the incentive payment. The collectives are independent in their choice of additional indicators for the payment of the bonus. In brigades that include managerial and other workers, the bonus is paid to the collective, but is distributed among them with a consideration of the specific contribution made by each member.

Provision is made for giving additional incentive to workers in stores that sell especially fashionable commodities and commodities with the N [new item] index. These bonuses will be paid from the funds received from enterprises in light industry that produce those commodities, provided the trade workers take active part in renewing the variety, improving the quality of the commodities,

and speeding up their sale. At enterprises and in organizations and agencies of administration of state trade and consumer cooperatives that have changed over to the new management procedure, reserving bonuses is not employed.

The new economic mechanism in trade will help to provide the accelerated development of the branch in conformity with the decisions of the 27th CPSU Congress.

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## LABOR

### STATE LABOR COMMITTEE OFFICIAL EVALUATES WAGE REFORM

Moscow ARGUMENTY I FAKTY in Russian No 48, 18-24 Nov 86 pp 1-2

[Interview with V. Shcherbakov, chief of the Wage and Salary Department, USSR Goskomtrud [State Committee for Labor and Social Problems] by ARGUMENTY I FAKTY reporter G. Valyuzhenich: "Let Pay Be Commensurate"; date and place not specified]

[Text] As of January 1, 1987 there will be a new wage and salary system for persons employed in the production sector. Our reporter, G. Valyuzhenich, interviewed V. Shcherbakov, chief of the Wage and Salary Department, USSR Goskomtrud, on certain aspects of the forthcoming reform.

[Question] Vladimir Ivanovich, why is there a need to revise the entire wage and salary system of workers in the production sector?

[Answer] The present system has been in effect for a fairly long period of time -- since the middle of the 1950s. Today, under the conditions of reorganization of the entire national economy in progress, it is unresponsive to the needs of the times. In addition, it is hindering progress, since it is not functioning as it should. How is this evident? It is sufficient to say that the lack of agreement between wage rates and end results of labor has long been a hindrance to our attaining any appreciable gains in labor productivity, with the average rates being what they are. And, because of this, the people's demands are growing faster than the possibilities of satisfying them.

The increases in wage rates and salaries made in the postwar years were, for a number of reasons, including objective ones, directed primarily toward low-income workers. A consequence of this was a narrowing of differences between wage rates for highly skilled workers and those possessing a low order of skill. Today, for example, in a number of branches a laborer rated at the higher level -- the 6th category -- earns only 1.5 times as much as a first category laborer.

The wage rate level is also unsuitable to present needs. It does not relate to the difficulty of labor output or quality; a low pay rate engenders a quest for amount of production rather than quality.

Distorted relationships between pay of engineers and laborers have come about. Salaries paid engineers have become lower than those of laborers, not only as

a result of lower incremental increases, but also in total amounts in a number of branches. There can be no doubt that this situation can have an adverse effect on scientific and technical progress.

Elements of the wage and salary system such as monetary awards, bonuses and supplementary increments have lost their motivational influence. In many cases they have become mechanical increases in the basic wage which make it possible to maintain the economically necessary level of income.

Norm setting requires thorough revision. It is considered that approximately 90% of the norms in use in the country are technically valid. However, even official statistics indicate that they are fulfilled in amounts of 125 to 135 per cent. They are quite often fulfilled in amounts of 200 to 300 per cent. This is an indication that a considerable number of norms is not valid technically, organizationally or economically.

The above shortcomings in the system result in a situation where a loafer is often paid the same wages as a conscientious worker, while a person who works creatively and enthusiastically cannot receive his just remuneration. This being the case, a person loses incentive if he is trying to improve his skills or improve his labor productivity. But that is not all. The prospect of "easy money" appears.

Thus, the present pay system does not allow the necessary degree of just distribution of the material fruits of labor as required by the fundamental principle of our society. In addition, it does not motivate people sufficiently to improve social labor. Only on the basis of this principle can we reach the planned qualitatively new landmarks in all areas of the national economy and raise the standard of living.

[Question] Does the reform provide for automatic increases in wages and salaries for all workers in production branches, starting on 1 January 1987?

[Answer] No. The fact is that wages and salaries will be increased on the basis of funds which enterprises and organizations will earn independently by virtue of self-financing and self-support of additional expenditures.

Internal resources must be found to accomplish the above. This work is very tedious, difficult and relatively time-consuming. It presupposes auditing of each work place, with possible reduction in number of work places. This will promote savings of time and materials; introduction of advanced equipment and technology; improvement in organization of labor; refinement of norm setting; increasing labor productivity; greater production, etc. For this reason, the time periods for introducing the wage increases will depend directly on each labor collective. It is assumed that the reform will take effect sometime during the present five-year plan, but a rigid schedule has not been set.

The new wage and salary rates will be introduced as the necessary funds are accumulated. No additional subsidies from the State budget will be made. As we know, if such subsidies were made, the larger salaries would not be

associated with an improved national well-being, since effective consumer demand would not be satisfied. There would be more money available than goods and services. The reform does take into account increases in consumer goods. For this reason, the money which a person will be able to earn will enable him to buy the goods which he needs.

I want to add that under the new wage and salary system each category of workers will be paid out of an independent fund. The general wage and salary fund will be divided into individual funds: for laborers, managers, specialists and line white collar workers, designers and technologists. This will not allow increasing the wages and salaries of some worker categories at the expense of work improvement of others. He who wants to earn more must do better work.

Managerial personnel will receive their increases after the salaries and wages of all line workers in a particular enterprise will be raised.

In general, the wage and salary increases will affect 75 million persons.

[Question] What is the main thrust of the reform?

[Answer] The wage system is based largely on the policy of tying earnings directly to end results of labor. In this connection, this introduces the mechanism of effecting growth in labor productivity as a result of wage and salary increase. The lack of difference between rates paid to highly skilled workers and those possessing a low order of skill should be corrected. It is planned to accomplish this by raising to a suitable level the wages paid to highly skilled workers.

The wage rates for laborers will be increased an average of 20 to 25 per cent. In addition, there will be a larger difference between wage rates of the first and sixth categories, which will tend to increase the number of qualified workers and provide an incentive for them to master more complex types of labor.

Improvements are being made in the wage and salary system applicable to workers in the primary branches, which are critical to acceleration of scientific and technical progress.

Thus, for example, in the case of machine building workers involved with adjustment, repair, and servicing of especially complex equipment, there will be special rates which will exceed those presently in effect by 40 to 45 per cent, and two additional categories will be set up.

[Question] Since people differ in their talents and abilities, the possibility remains that some persons will be able to fulfill a newly established norm, say in the amount of 200%. Can a worker be sure that he will be paid accordingly? Or will some kind of limitations still apply?

[Answer] No. There will be no imposition of artificial limitations, such as "clipping off" of rates. The new reform is a specific application of the

principle of "letting pay be commensurate with work". There will be no "ceiling" for laborers. Norms, which are established during auditing of work places, may be modified when changes are made in equipment, technology or the entire work setup. Thus, if a worker increases his output as a result of becoming more proficient, he will be suitably rewarded for his work.

[Question] How will the prestige of engineering work be restored?

[Answer] Mainly by increasing engineers' salaries and setting up efficiency categories. In addition, a more direct relationship is being established between the amount of remuneration for a specialist and the end results of labor.

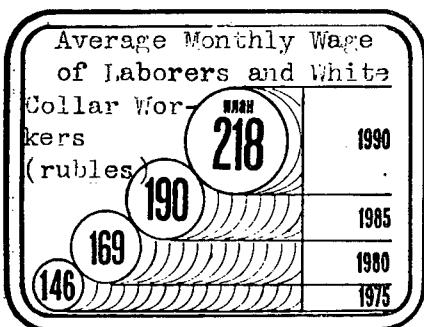
Salaries paid to specialists will be raised an average of 30 to 35 per cent, while key category personnel -- designers, technologists and foremen -- will benefit by a 40 to 45 per cent increase. Instead of the two existing positions of "engineer" and "senior engineer", there will be the four skill categories of engineer, engineer category II, engineer category I, and key engineer. This will be conducive to creative work on the part of a specialist. He will be paid not for the position he occupies but for a definite contribution, for work actually accomplished. Growth in occupational excellence and qualifications alone will enable the specialist to increase his salary from 140 to 260 rubles. On top of that, he could be the recipient of bonuses for exceptional attainments in work or for accomplishing responsible tasks; they can be as much as 50 per cent of his basic salary.

Thus, the total salary which can be earned by a designer or technologist who does good work can attain 390 rubles.

[Question] Vladimir Ivanovich, does the reform include a provision for penalizing workers who are not suited to the job, fail to maintain their skills or perform below the norm?

[Answer] Yes, and this must be emphasized.

Managers of enterprises and associations, operating in conjunction with occupational committees, are given the authority on the basis of the work place audit, of not only promoting workers and setting the amounts of bonuses, but also of reducing the wages paid workers whose performance falls below that called for or who consistently violate technological procedures in effect at their place of employment; reducing or cancelling bonuses; lowering a worker's skill category; and, when necessary, letting a worker go.



LABOR

BeSSR OFFICIAL INTERVIEWED ON UNEARNED INCOME ABUSES

Moscow SELSKAYA GAZETA in Russian 3 Feb 87 p2

[Interview by SELSKAYA GAZETA stringer V. Slavinskiy with Militia Colonel Yaroslav Vladimirovich Ilnitskiy, deputy chief of the BeSSR Ministry of Internal Affairs Administration for Combatting Embezzlement of Socialist Property and Speculation: "Stopping the Trade Marauders"; date and place of interview not given, first three paragraphs are source introduction]

[Text] Speculation and embezzlement are the most dangerous forms of unearned income. V. I. Lenin called speculators "trade marauders."

What is necessary, first and foremost, to eradicate such improper occurrences? What is being done?

Our stringer, V. Slavnskiy, talked about this with the deputy chief of the BeSSR Ministry of Internal Affairs Administration for Combatting Embezzlement of Socialist Property and Speculation [UBKhSS], Militia Colonel Ya. Ilnitskiy.

[Question] Yaroslav Vladimirovich, frequently it can be heard that a speculator is almost a benefactor. Try, so they say, to get by without his help! A speculator has "everything," but in the stores, alas...

[Answer] Average people are influenced by similar arguments. Their principle is "it is none of my business." In using the services of the speculator, they understand full well that the goods offered to them in the majority of instances have been obtained by evasion of existing rules and procedures.

[Question] But why does a speculator have "everything"?

[Answer] I will explain using an example. Some young people--Bochkarev, a student at the Economics Institute, and Tregubovich, his friend--decided to "make money" from scarce footwear. But, before reselling them it is necessary to buy them and buy them in sufficient quantity. And the entrepreneurs found a loophole. Rusinovich, the manager of the Minsk Second-Hand Store No 2 wanted to participate in the matter. The question arises, what kind of help can the second-hand store manager give? As it turned out, his mother was the manager of a shoe store. Now the speculation conveyer belt was set up. and the scarce boots and running shoes went past the counter.

The UBKhSS workers caught the companions red-handed during the completion of a routine transaction. Bochkarev and Tregubovich were each sentenced to 5 and 1/2 years imprisonment. The other speculation participants were also convicted.

[Question] As the popular saying goes, "Oh what a tangled web we weave..."

[Answer] Of course, the finale of similar marauders is in accordance with the law. Sooner or later, every one of these dealers ends up in the prisoner's dock. But let us look at things from another point of view...

Bochkarev, Tregubovich and those with them were not speculating on another planet. In the shoe store they saw that the scarce shoes were being diverted. But no one lifted a finger to rebuff the speculators.

But, indeed, the danger of speculation lies in the fact that it violates the principle of socialist management and disorganizes the normal activities of trade. The populace loses a specific part of their monetary resources by obtaining goods at speculation prices.

It has been calculated that annually in the nation, speculators "skim off" more than 1.5 billion rubles. This means that the families' budgets are decreased by so enormous a sum without any equivalent in goods.

[Question] What are the reasons for the great vitality of speculation?

[Answer] I assume that it would be necessary to put in first place the scarcity of goods. Then there are the shortage of good-quality items, the shortcomings in the operations of the trade organizations and the lack somewhere of control over distribution--this is by far not a complete list of the flaws which give birth to speculation.

One must also add the passivity and clumsiness of the procurement organizations of the consumers cooperatives and other departments in purchasing from the people the surpluses of agricultural products.

The travelling speculators frequently buy up in large groups the production in areas where there are surpluses and sell them at the markets in the large cities. And at times even through rayon procurement offices and consumers cooperatives stores.

For example, in Minsk they uncovered a dyed-in-the-wool speculator, Gulokhmetov, a resident of Kherson, who bought up fruit and other products in the Kherson Oblast and sold them here. And there are quite a few similar cases. Therefore, the struggle against speculation in agricultural products is one of the most important directions of the operations of the UBKhSS offices.

[Question] Let us assume that a shortage does not exist and that there is an abundance of all kinds of goods and products. Would the speculators then disappear?

[Answer] I do not think so. They are generated not only by the scarcity of goods but also, as it happens, by the inequities of prices. In Gorkiy the Sazankovs, husband and wife, organized a criminal group and, availing themselves of the differences between the retail prices for meat in the Mogilev Oblast and the purchase prices in the Smolensk Oblast, engaged in speculation.

The striving for profit displaces all of a speculator's other feelings. And then he goes on to deception, forgery and the like, in order to sell goods at raised prices. And the unsuspecting people buy, not guessing that similar items are also being sold in the usual stores.

The passion for lots of money is infectious. Many people, probably, have heard that Mirgorodskiy, a resident of Brest, was sentenced to 15 years imprisonment for speculating in sunglasses. But his wife was cleared of any responsibility due to the fact that she was participating in the speculation, allegedly, under pressure from her husband. And what conclusion did she draw from what had occurred? A most unexpected one. Six months after her husband's trial, Mirgorodskaya was convicted of speculating on a large scale.

[Question] Is it possible to consider as speculation instances where agricultural products obtained at a kolkhoz or sovkhoz as a payment-in-kind for work are sold at the markets at higher prices?

[Answer] This is a complex and burning question. The USSR Supreme Court's Plenum explained it thus: the sale at market prices of vegetables, fruits, melons and other agricultural products obtained at a kolkhoz or sovkhoz as payment for earnings in accordance with a contract does not constitute speculation.

But if, for the purpose of profit, someone purchased agricultural products and later resold them for much higher prices, then this is speculation.

It is necessary to distinguish clearly between the self-seeker, the second-hand dealer and the speculator and the honest workers selling at the market surpluses of agricultural products grown on personal secondary plots or obtained from the kolkhozes and sovkhozes as payments-in-kind. Such activities are encouraged by the state and are finding ever greater support from the soviet and economic organs.

[Question] But there are people who try to use any positive trends and undertakings for mercenary purposes...

[Answer] And so it happens. Recently in Grodno Oblast, a group of inhabitants from the Shchuchinskiy Rayon (the investigation of some of them is not yet complete so I am not giving the names) were exposed and charges were filed against them. In 1985 and 1986, they bought up apples and potatoes where they live and shipped them by the tons to RSFSR and Moldavian cities, where they were sold at local markets at speculation prices. At the same time, they produced documents to show that they had grown the products on their own personal plots.

The UBKhSS workers, having taken an interest in the Shchuchinskiy entrepreneurs, exposed them.

[Question] A large number of mercenary crimes are being uncovered annually in agriculture and also in the sectors involved in the processing of these products. What measures is the UBKhSS service taking in this direction?

[Answer] The rural area attracts a lot of seekers after easy profit. Go-getters, second-hand dealers, organizers of secondary production and other types of dealers last year tried to put tens of thousands of rubles into their own pockets. Many shady transactions are associated with the production and sale of food products. Thus, B. Labikov, chairman of the Dobrushkiy Rayon's Kolkhoz imeni Frunze, S. Krivitskiy, the chief livestock specialist of the Mstislavskiy Rayon's Sovetskaya Belorussiya Kolkhoz, and V. Sarvirov and D. Basalayev, the assistant manager and the chief of the administration for the production and technological unit [respectively] of the Belpishchestroymontazh [BeSSR Ministry of the Food Industry Construction and Installation] Trust were all held accountable for embezzlement and other mercenary crimes.

Serious concern is also caused by the circumstance that every fifth criminal infringement on state and public property from agroindustrial complex sites are of an organized nature.

[Question] There is a widespread impression that the plunderers and speculators are thriving because of the poor operations of the law-enforcement organs...

[Answer] Unquestionably, the success of the struggle against unearned incomes depends to a great degree on the operations of the law-enforcement organs and, first and foremost, of the UBKhSS service. But the complete eradication of similar negative occurrences requires one path, the unification of efforts. The law enforcement organs are counting on the active help and support of the labor collectives, of volunteers and of the people's controllers.

It is necessary also to increase significantly the personal responsibility of the managers of kolkhozes, sovkhozes, and the enterprises and organizations of the agroindustrial complex for the observance of the laws and of state discipline. Only by common efforts is it possible to stop the lovers of the "easy" ruble.

12752 CSO: 1828/81

EDUCATION

BETTER SOCIAL SCIENCE TRAINING IN APK ENCOURAGED

Moscow SELSKAYA ZHIZN in Russian 22 Jan 87 p 3

[Article by A. Ivanov, candidate of economic sciences and Head of the Department of Political Economy at the Moscow Agricultural Academy imeni K. A. Timiryazev: "From Knowledge to Conviction. How to Improve the Quality of Social Science Instruction at VUZs of the USSR State Agroindustrial Committee"; first paragraph is SELSKAYA ZHIZN introduction]

[Text] The VUZ and Its Problems

When the speaker, one the group's best students, finished his report, a forest of hands went up. There probably wasn't a single person who did not want to say something about the questions under discussion. A heated discussion ensued which not only went beyond the four class hours that flew by unnoticed, but moved across the threshold of the usual concepts of seminar sessions. The battle of opinions, the clash of viewpoints -- all of this took place at a seminar on ...political economy

I think that the three dots that precede the name of the discipline which I have been studying and teaching for some decades now, is quite justified. Are there many VUZ social scientists who, upon placing their hand on their heart, would say that the described seminar is something from their own experience? Probably only a few. We surely know that lively, pointed seminars that are memorable occasions to both students and instructors are, alas, a very rare thing. And it is no accident that the All-Union Conference of Social Science Department Heads heard loud assertions about the need to reject decisively teaching methods and forms that are conducive to dogmatism and scholasticism, the regurgitation of truisms, and a fear of what is new. For surely, it has been just this kind of approach that has placed the social sciences, as it were, in a second class role.

I am convinced that those persons who do not see or who do not wish to see all of this, will not understand the essence of the changes now taking place in our country. "Restructuring," emphasized M. S. Gorbachev in his addresses, "begins with the breakdown of traditional, stagnant psychological attitudes and with the activization of the human factor."

The most important task of the social sciences is the formulation of a scientific world outlook, the spiritual personal foundations of the Soviet citizen, and the citizen's active civil attitude. That is why the Party is placing so much importance on a clear-cut improvement in the quality and effectiveness of instruction.

A concise, scientifically substantiated program for the restructuring of the social sciences was worked out at the conference. Among the priority goals is the need to overcome the gap between science and everyday practice, between theory and real life. A particularly great deal of work must be done on the improvement of programs, lectures, textbooks, and other teaching method literature. Action on these problems is long overdue. Take, for example, political economy textbooks. Practically none of those textbooks analyze the frequently negative processes that were taking place in the Soviet economy in the 1970's and beginning of the 1980's. The most essential problems are evaded, and all the ragged edges are smoothed over. The result was that under actual production conditions the students ran into phenomena that they "hadn't covered" at the institute. Most of their textbooks were written in a boring and inexpressive manner, and there were many places which were generally very difficult to understand. Could not that be the reason that young people started to lose interest in political economy?

The study of a textbook in the social science disciplines should entice the student and stimulate him to make independent interpretations of what is happening around him. I believe that in order to have that kind of textbook there should be a competitive atmosphere created about their preparation. That is the first thing. The second thing is that it would apparently be desirable to return to the practice whereby the leading VUZs can publish lectures on individual, highly important and key topics or problems. What would be the value of this type of instructive literature? Flexible responses would be made available for any particular event, and explanations would be offered for many processes in which we are participants or witnesses, and basic trends in the development of Soviet society might be outlined, in advance of actual practice. These kind of lectures (which might conveniently be published as brochures) could be prepared by young scholars who, by the same token, would be stimulated to engage in serious scientific research. This factor is a very important one, since the publication of even a small scholarly article is not that simple for young associates in the social science departments.

The publication of "its own" lectures by a major VUZ would also make it possible to account more fully for the specificity of a VUZ. I think that many would agree with me that a course in political economy, say, at the Moscow Agricultural Academy imeni K. A. Timiryazev, should be different from one taught at the Moscow State University or the Moscow Higher Technical School imeni N. E. Bauman. As a rule, textbooks are oriented to a certain average "graded" student. That is one of the reasons for the fact that knowledge in political economy is relegated to the student's "short-term memory fund" which leaves the student a few weeks after his

examination. And we know that excessively general and abstract knowledge is hardly going to be helpful in an analysis of certain processes and phenomena that are taking place at an enterprise, rayon, or oblast.

In that connection, I should like to touch upon a planned new program for a political economy course that was published in the eighth issue of the journal EKONOMICHESKIYE NAUKI for 1986. It seems to me, for example, that topic 36 -- Reproduction Characteristics in the Agro-Industrial Complex -- must allow the agricultural VUZs to study a broader scope of problems concerned with their area of specialization. Incidentally, our department submitted a number of recommendations and comments in the course of the plan's preparation, although most of those recommendations were not heeded. We do not consider this to have been helpful.

We see the teaching plan to be a more flexible one which would offer some room for maneuverability in the study of political economy. The restructuring of the higher and secondary specialized schools is providing for up to 15 percent of reserve teaching time in the instruction plan. It would be desirable to use that reserve to intensify courses in accordance with the VUZ's specialization.

Now as to the forms and methods of teaching. In recent years there has been a growing belief in our department that the teaching of political economy has been increasingly taking on "extensive" characteristics. What is meant by that? It has become stylish to introduce as many new and as yet untested forms and methods as possible into the teaching process. Frequently, not only does this not produce the desired effect, but often is injurious to teaching as a whole. For example, some instructors demand that all their students must without fail write abstracts of the topic under study. Is this really possible? I think not. Each one will of course write something, but how? Usually such "abstracts" constitute pages copied from a textbook or a monograph. Such work, however, can turn out to be interesting and of good quality if the instructor helps the student. But this would require the instructor to spend a minimum of two to three hours with each student. And where is the instructor going to find so much time?

In our pursuit of new teaching forms and methods, we often give less attention to the basic, tested forms such as the lecture and practical class exercise. Surely, the improvement of such forms is a realistic path toward improving the effectiveness of instruction. In our department, for example, we often have classes in which the principal report is given by one of the strongest students whereas the rest of the students prepare themselves to participate in a discussion on each question of the topic. The preparation of the report takes no less than two to three weeks during which the student is assisted by an experienced instructor. The result is a substantive communication which sets the tone for the entire class and stimulates the group's activity.

The instructor is without question the principal figure in the teaching-training process. However, it seems that a more active and effective role in that process could be taken by the public organizations of VUZs, and particularly by the Komsomol committees. Let us recall the 1960's. Then a komsomol would not be indifferent to the fact that part of the students, say, "cut" a lecture or seminar in CPSU history, political economy, or scientific communism. Then the young man or woman would be held strictly accountable. That was necessary then not only for the sake of "two-fold" supervision, but also to establish feedback, so to speak, when the komsomols' fundamental attitude to classes in the social science disciplines provoked the instructors themselves to approach those classes in a more responsible fashion.

The task that now confronts the social scientists at the VUZs of the USSR State Agroindustrial Committee is to train highly qualified specialists for the kolkhozes, sovkhozes, and inter-sector enterprises, who with their heart and soul understand the essence of restructuring and who have a good command of the science of communism and are able to utilize it in practice. That task must be resolved daily in a purposeful manner.

6289  
CSO: 1828/61

## RAIL SYSTEMS

### MARABDA-AKHALKALAKI LINE ELECTRIFICATION NEARS COMPLETION

Moscow GUDOK in Russian 22 Jan 87 p 2

[Article by S. Babayan, GUDOK correspondent: "Mountain Route"]

[Excerpt] Akhalkalaki--The sound of an electric locomotive whistle has been heard for the first time at the Akhalkalaki Passenger station. It has been awaited impatiently for over a year. And now a train has travelled along the entire 160-km route from Marabda to Akhalkalki on electric traction.

The last section from the Pokani station to Akhalkalaki was particularly difficult for the railroad builders. The swirling snow from previous snowstorms had piled up in the path of the electrical workers. It had been extremely difficult for them to construct and complete the final 43 km of the route but they coped successfully with this demanding job. The electric locomotive had travelled along the high mountainous leg without stopping, meaning that the line was ready for use during the work week.

"The construction work isn't finished yet," says V. Todua, deputy administrator of the Zaktransstroy Trust. "But it looks as though the main and most difficult business has been taken care of: the electrified steel line has been laid, 13 stations and 8 traction substations have been opened up, dozens of km of station track have been laid and 14 large and medium bridges have been built as well as 12 viaducts.

Zaktransstroy was given help in constructing the line by collectives of transport construction workers from a number of the country's cities. The atmosphere of mutual understanding, mutual aid and support helped speed up the work and create a backlog for the future. Many of the construction workers well remember the three days when the bulldozers made it through a snowstorm to help a snow-removal machine's crew who had gotten buried in snow. The comrades were helped out of their trouble by efficient and capable action.

As T. Kertava, chief of the Zaktransstroy Trust Production Department tells it: "A great deal of snow had been falling, and the rails had to be delivered on motor vehicles from Akhaltsikhe. We didn't want to disrupt the schedule by waiting until the snow stopped falling, so we decided to remove the snow from the tracks. Then we re-cleaned many thousands of cubic meters of snow from the tracks and laid five km of rails, but we were winning time.

The track was ready for use, but the construction workers still had too much to do. They still had to set up a freight complex, build housing, hospitals, kindergartens and train station buildings. More than R7 million of work have been planned for this year alone.

The operational personnel also have a great many concerns. The Transcaucasus Line Administration has a program which should make it possible to make the line habitable more quickly. There are a great many problems still to be solved, but the main thing--and this is indisputable--is that the line from Marabda to Akhalkalaki will infuse the life of this mountainous region with a new rhythm.

12659

CSO: 1829/152

## RAIL SYSTEMS

### METRO TEST TRACK URGED FOR NEW ROLLING STOCK DEVELOPMENT

Moscow MOSKOVSKAYA PRAVDA in Russian 17 Jan 87 p 3

[Unattributed article: "We Need a Metro Test Facility: Specifications Developed for New Metro Cars"]

[Text] Inside the dark "dip" of the tunnel, the lights of the approaching consist began to shine from a distance. Then it is already alongside us, but it shows up without the usual warning noise. Quietly, with almost no noise, the express rolls up to the platform. Unusually long, it stretches along the entire length of the platform. In fact it consists, not of the usual 7-8 cars, but 12, so that even during the peak hour it can easily take on all the passengers. The cars are painted the traditional blue and the interior finish work is brand new. The car interior looks very nice with its attractive decorative plastic trim. Everything has been designed taking the requirements of contemporary design into account.

No, for the time being, you won't be seeing this consist either on the metro lines or in the plant shops. This is a picture of the future Moscow Metro, which is being designed by experts from the All-Union Scientific Research Institute for Railroad Transport. They have now begun work on developing the documentation for the cars which must replace the rolling stock now in use on the underground lines. It is not only because of their decorations that the blue trains will stand out. Their technical equipment will help save electric power and move them along faster. They will travel smoothly, with less vibration and noise. The current voltage for these consists will be pulse controlled, and will vary depending on the driving conditions. Thus, for example, if the consist moves out on a leg of its run which has a gentle incline, it requires a great deal of power. When travelling downhill, the wagons themselves begin to return this power, saving up to 20 percent of it.

The cars' structural elements are to be made of stainless steel, and the cars will be equipped with powerful but economical motors. So these express trains will be capable of travelling at speeds of up to 130 km per hour, unheard-of for underground lines.

Will the designers be able to carry out all these promising plans? Actually, at the time when the present cars were being built, a great deal of advance

payment funds had been forthcoming. However, when they began running on the metro routes, a great deal of uncompleted work came to light.

"And all of this could have been avoided as far back as the prototype stage, had the 'authors' of this new equipment had a testing base at their disposal," explains Deputy Head of the VNII [All-Union Scientific Research Institute] of Railroad Transport's Metro Department I. S. Gomza. "It was decided long ago to build a metro test facility. Even the deadline for the beginning of its construction was mentioned in the documentation. Construction work on the test facility was supposed to have begun a year ago. But they haven't even removed the earth from beneath our test facility yet. We are waiting impatiently for the Moscow Town Soviet of Working People's Deputies' Executive Committee decision on the allocation of the territory for the facility, but it hasn't come yet."

Why do we need a metro test facility? The new cars which will be used in the future will serve the planned high-speed lines which will travel dozens of km beyond the Ring Road. Improved steel tracks are being laid for these runs, and the line's new design will permit high-speed runs. You can see that there's no way these new trains can tried out with a normally operating metro. Of course, the previous consists had to be checked out right on the lines. As is well known, there is very little free time on the underground tracks. They start moving very early in the morning, and the last train doesn't stop running until two in the morning. And even this quiet period of time is busy: consists are being moved from one place to another, and preventive maintenance inspections and repair are being carried out.

Meanwhile, real tests of new equipment require extended and repeated checks of every element of the design. Adjustments and various changes are made in the course of these tests. And that's why we need a test facility: so that we don't test them hastily, but thoroughly, and in action.

The steel lines coil like three rings. Each ring of rails is placed inside another, which has a greater diameter. These lines with no beginning and no end make up the main section of the railroad test facility, located in the districts near Moscow. The largest ring is 6 km long. Here, all the new railroad equipment can be tested while in operation. True, these lines are unsuitable for testing development of the metro trains. A special line is needed for this purpose. Specialists from the Institute have repeatedly proposed that another steel ring be laid specially for the blue express trains. All this could be located right next to the railroad test facility.

The several stops, gently inclining downhill runs, slight grades are exactly what are called for in the design for the metro test track. Movement here would be controlled by automatic devices. In principle, a train could be run on such a line without a motorman. A dispatcher will send a signal from a control panel. Automatic devices will carry out his every command: the train is sent off at an assigned speed, stops, opens the doors, and slows down at a predetermined section. The system will be capable of controlling several consists at once. Incidentally, this very equipment, which has been made part of the future test facility, would later be brought into the existing stations. True, the consists already on the lines are controlled in part by

automatic devices. Many of the express trains, thanks to the help of these devices, travel their routes with only one motorman, and no assistant.

It is not only new cars which would be tested on the test facility, but other designs, meant to improve underground transport as well. Thus, there are plans to make ready a new series of escalators. They will be equipped with a special device to control the motion of the escalator floor. For example, it will be made to move faster during the peak hour, and slowed down during regular hours. These escalators will be finished and trimmed with new materials, and will be of a more reliable and durable design.

Also, the so-called tunnel "lining" will be tested at this facility. Its design must make it easy to install, waterproof and cheap to manufacture. And the main thing is that it be reliably protected from corrosion.

And all the safety equipment controlling movement on the tracks must also be examined at the test facility. In fact, in due course it has been decided to completely do away with signal lights on the underground lines. There will simply be no need for them. A station-announcing system has been provided for the passengers. Since the train will be moving very quietly, special monitors will announce the approach of the trains. And from the platform, the passengers will be able to see the consist, underway at the time, on the monitor screens.

The new technical systems, which will enhance the frequency of the train traffic, will also undergo testing. In the future, the intervals between trains will be sharply reduced. They will be arriving practically one after the other. It is easy to see that a crowded time-table such as this requires the most perfect motion-control system. Without a test facility, such a system cannot possibly be devised.

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